DEVELOPING NETWORKS FOR EDUCATIONAL COLLABORATION: AN EVENT HISTORY ANALYSIS OF THE SPREAD OF STATEWIDE P-16 COUNCILS

By

Christine G. Mokher

Dissertation

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Leadership and Policy Studies

May, 2008

Nashville, Tennessee

Approved:

Professor Michael K. McLendon

Professor Mark Berends

Professor William R. Doyle

Professor James C. Hearn

Copyright © 2008 by Christine G. Mokher
All Rights Reserved

To my beloved husband, Joseph

ACKNOWLEDGEMENTS

I am extremely grateful for the advice and support of my committee members: Michael McLendon, Mark Berends, Will Doyle, and Jim Hearn. I was also very fortunate to have had the opportunity to work with all four of these outstanding scholars on other conference presentations and journal papers, and have learned a tremendous amount from each of them during my time at Vanderbilt. Most especially, I am indebted to Michael for being such a wonderful mentor, colleague, and friend over the past three years.

This research would not have been possible without the financial support of Peabody College and the Graduate School at Vanderbilt University, which provided the funding for my doctoral education and for the completion of this dissertation. I would also like to thank the following individuals for sharing select data: Dan Coffey at the University of Akron, Alex Gorbunov at Vanderbilt University, David Kysilko at the National Association of State Boards of Education, and Tess Moore at the National Governor's Association.

Finally, I have been truly blessed to have such a loving and supportive family that has been there for me throughout my graduate education and always. I would like to thank my mom and dad, whose unconditional love and guidance are with me in whatever I pursue. I am also forever grateful to my husband, Joseph, whose seemingly endless patience and encouragement has been the source of my strength and motivation. You bring me so much happiness and I love the life that we share together. And to our unborn child, whose every little movement has given me the extra motivation to finish this dissertation quickly….I can't wait for you to join our family.

TABLE OF CONTENTS

Page

DEDICATION iii

ACKNOWLEDGEMENTS iv

LIST OF TABLES vii

LIST OF FIGURES ix

Chapter

I. INTRODUCTION 1

Research Questions 3
Overview of the Study 4

II. IDENTIFICATION OF THE PROBLEM 6

A History of Separate Educational Systems 6
Evidence of the Disconnect between K-12 and Higher Education 10
The P-16 Reform Movement 13
The Role of P-16 Councils and their Limitations 17

III. CONCEPTUAL FRAMEWORK 23

Traditional Frameworks of the Policy Process 23
State Policy Innovation in Education 28
Network Theory 37
Hypotheses 43

IV. RESEARCH METHODS 59

Definition of P-16 Councils 60
Variables and Data 65
Quantitative Content Analysis of Governors' Speeches 77
Event History Analysis 84

V. FINDINGS 92

Descriptive Statistics 93
Survival and Hazard Functions 97

Results for State Formation of Any P-16 Council 102
Results for State Formation of a Mandatory P-16 Council 116
Discussion of Findings 134

VI. CONCLUSION 147

Review of the Study 147
Theoretical Implications 149
Research Implications 163
Study Limitations 165
Summary of the Contributions of this Study 167

Appendix

A. DESCRIPTIONS OF P-16 COUNCILS BY STATE 170

B. INDEX OF EDUCATION WORDS FLAGGED IN GOVERNORS' SPEECHES 212

C. IRB APPROVAL LETTER 213

REFERENCES 214

LIST OF TABLES

Table Page

1. Significant Political, Economic, Demographic, Organizational, Educational, and Geographic Factors in Studies of State Adoption of Education Policies 29

2. Overview of Theoretical Framework and Proposed Variables 43

3. Statewide P-16 Councils by State, Name, Year Established, Type, and Study Criteria 61

4. Initial Year of State Formation of P-16 Councils, by Type 66

5. Variable Descriptions and Sources 69

6. Average Percent of the State-of-the-State Speech on Education for Governors Previously Identified as "Education Governors" 83

7. Descriptive Statistics for Variables in the Analysis, 1992 and 2007 92

8. Intercorrelations of Variables in the Analysis 95

9. States Forming a P-16 Council with Survival and Hazard Functions by Year 98

10. Results of Cox Proportional Hazards Models for Formation of Any Type of P-16 Council 103

11. Nonproportionality Tests for State Formation of Any P-16 Council 107

12. Predicted Survival Probabilities for Formation of Any P-16 Council in 2007 for States with High, Average, and Low Values of Significant Covariates 112

13. Results of Cox Proportional Hazards Models for Formation of a Mandatory P-16 Council 116

14. Nonproportionality Tests for State Formation of a Mandatory P-16 Council 120

15. Results for Cox Proportional Hazards Model for Formation of a Mandatory P-16 Council, Including Interactions with Time for Non-Proportional Hazards 124

16. Nonproportionality Tests for State Formation of a Mandatory P-16 Council with Time Interactions for Consolidated Governing Board and Total Population (Logged) 125

17. Predicted Survival Probabilities for Formation of a Mandatory P-16 Council in 2007 for States with High, Average, and Low Values of Significant Covariates 129

LIST OF FIGURES

Figure Page

1. State Formation of P-16 Councils, Selected Years from 1995 to 2007 97

2. Survival Function: Formation of Any P-16 Council 100

3. Survival Function: Formation of a Mandatory P-16 Council 101

4. Deviance Residuals for State Formation of Any P-16 Council 108

5. State Formation of Any P-16 Councils: Survival Function by Unemployment Rate 109

6. State Formation of Any P-16 Councils: Survival Function by Chance for College by Age 19 110

7. State Formation of Any P-16 Councils: Survival Function by Total State Population 111

8. Predicted Probability of Survival by State: State Formation of Any P-16 Council in 2007 114

9. Plots of Schoenfeld residuals for Non-Proportional Hazards 121

10. Deviance Residuals for State Formation of a Mandatory P-16 Council 126

11. State Formation of Mandatory P-16 Councils: Survival Function by Percent of the Governor's Agenda on Education 127

12. State Formation of Mandatory P-16 Councils: Survival Function by Chance for College by Age 19 128

13. Predicted Probability of Survival by State: State Formation of Mandatory P-16 Councils in 2007 131

CHAPTER I

INTRODUCTION

One of the most distinctive features of governance in American education is the level of separation between K-12 and higher education (Maeroff, Callan, & Usdan, 2001; Tucker, 2004). Disparities in high school graduation requirements and college entrance requirements, differences between secondary and postsecondary assessments, misaligned curriculum content, a lack of student awareness of information needed to make the transition to college, and conflicting expectations between school teachers and college faculty have all been cited as evidence of the disconnect between the two sectors (Boswell, 2000; Kirst & Bracco, 2004). Researchers have suggested that this organizational divide has contributed to problems such as the under-representation of low-income and minority students in postsecondary education, increasing demands for remedial education, and low levels of college persistence and degree completion (Kirst, 2005; Maeroff, Callan, & Usdan, 2001). Despite common concerns such as improving student achievement and equality of educational opportunities, there have traditionally been no formal mechanisms in place to link the two systems.

One recent policy effort to strengthen connections across all levels of education is the development of statewide P-16[1] councils. The purpose of these organizations is "to create a system of education which begins in early childhood and ends after college that

[1] The term P-16 is commonly used to refer to pre-school (P) through college (grade 16) education. In some states, collaborative efforts begin with Kindergarten (K) or continue through graduate education (grade 20). Throughout this study, the term P-16 is used broadly to refer to education from early childhood through the postsecondary level, although individual states may use different terms (e.g. P-20, K-16).

promotes access, standards, accountability and life-long learning. Other common goals include smoothing the transition from high school to college, improving teacher quality, reducing remediation and raising student achievement across all educational levels" (Education Commission of the States, 2006, p. 1). Between 1992 and 2007, thirty-one states had adopted some form of statewide P-16 council, yet little is understood about the factors which have facilitated or impeded this progress toward greater cross-sector collaboration. This study will explore how organizational structures, political leadership, and environmental conditions have influenced the formation of statewide P-16 councils in the American states using the methodological technique of event history analysis. A closer examination will also be given to understanding the role of "education governors," or state chief executives with a special interest in education reform, in initiating mandatory P-16 councils through the legislative process or executive orders.

Network theory will be used as a central organizing theory for understanding the development and operation of complex organizational structures such as P-16 councils (e.g. Arganoff & McGuire, 1998; Goldsmith & Eggers, 2004; Milward & Provan, 2000; O'Toole & Meier, 2000; Powell, 1990). Within this broad theoretical framework, hypotheses will be supported by three main bodies of literature and research: (1) the comparative state politics literature, particularly as it relates to the role of governors in agenda setting and state policy formation (e.g. Barrilleaux & Berkman, 2003; Beyle, 2004; Coffey, 2005; Dometrius, 2002; Herzik, 1991; Van Assendelft, 1997); (2) the growing literature on state policy adoption in both K-12 and higher education (e.g. Doyle, 2006; Hearn, McLendon, & Mokher, 2009; McLendon, Hearn, & Deaton, 2006; McLendon, Heller, & Young, 2005; Mintrom, 1997; Mokher & McLendon,

Forthcoming; Wong & Langevin, 2005; Wong & Shen, 2002); and (3) the literature on educational governance in both sectors (Hearn & Griswold, 1994; Hearn, Griswold, & Marine, 1996; Herrington & Fowler, 2003; Knott & Payne, 2003; Lowry, 2001; Manna, 2006; Meier & O'Toole, 2000; Nicholson-Crotty & Meier, 2003; Smith & Wohlstetter, 2001).

Research Questions

The P-16 councils in some states were initiated by voluntary collaborations among state agencies such as the department of education and higher education governing board. In other states, P-16 councils were mandated through executive orders of the governor or legislative statutes. This study will examine factors influencing the formation of 1) the *first* P-16 council in each state, regardless of type, and 2) the first *mandatory* P-16 council in each state. Both voluntary and mandatory P-16 councils involve many of the same actors and serve similar purposes, so many of the same factors may influence the adoption of both types of P-16 councils. However, mandatory P-16 councils require an additional leadership initiative on behalf of elected officials to bring the issue to the forefront of the state's policy agenda. It is also important to examine the spread of mandatory P-16 councils separately because these organizations may have a more influential role in education policymaking than voluntary councils. Mandatory P-16 councils may receive greater recognition among state policymakers, involve a wider range of actors than would be achieved through voluntary participation alone, and are more likely to receive resources from the state such as authoritative powers or appropriations.

The specific research questions addressed in this study are as follows:

- What organizational structures, leadership influences, and environmental conditions have influenced the spread of statewide P-16 councils in the American states?
- In particular, does the presence of an "education governor" increase the likelihood that a state will form a mandatory P-16 council? If so, how do formal authority, broad-based support, involvement in professional associations, and electoral cycles affect the governor's ability to effectively influence the state's decision to adopt a P-16 council?

Overview of the Study

Following this introduction, chapter two will identify the problem of separate K-12 and higher education systems in the American states. After providing evidence of the disconnect between the two systems, this chapter will discuss the emergence of the P-16 education reform movement, with a special emphasis on the formation of P-16 councils as a policy response implemented in select states. Chapter three will describe the conceptual framework for this study by providing an overview of traditional frameworks for state policy adoption studies and proposing the use of network theory as a new lens for understanding the formation of statewide P-16 councils. Chapter four will explain the research methods for this study including variable definitions, data collection, procedures for a quantitative content analysis of governors' speeches, and the use of event history analysis. Chapter five will present the results of the analysis, along with predictions of the likelihood of P-16 council adoptions for individual states. Finally, the conclusion in chapter six will provide a discussion of the findings and limitations of this study, as well

as directions for future research. This section will extend beyond answering the research questions posed in this study by examining what the findings contribute to the broader body of literature in regards to how leadership influences and environmental characteristics may affect the state policy innovation process. In particular, the findings from this study may have broader theoretical implications for contributing to the debate of "who governs and why" in the relatively new policy context of network organizations. This chapter will conclude with a summary of the substantive, analytical, and conceptual contributions of this study.

CHAPTER II

IDENTIFICATION OF THE PROBLEM

This chapter begins by setting the historical context for understanding why separate higher education and K-12 systems developed in the American states. Changes over time in access to educational opportunities that have led to the need for greater collaboration between these educational sectors will be described. Further evidence will also be presented regarding some of the problems commonly attributed to the continued disconnect between the two systems in today's society. Next, an overview will be provided of the emergence of the P-16 reform movement and some of the common barriers that have hindered progress in P-16 collaboration. Finally, the formation of P-16 councils, as one of the first widespread efforts at increasing cross-sector collaboration, will be discussed; as well as the functions and limitations of these organizational structures.

A History of Separate Educational Systems

The history of separation between K-12 and higher education systems can be traced back to the period following the American Revolution when only the social elite received a higher education. During the Colonial period, very few colleges existed and less than one percent of the population attended college (Brubacher & Rudy, 1997). As the Colonies became wealthier following the Revolutionary War, prosperous merchants began sending their sons to college to learn how to become gentlemen. In the 1830s,

alternative institutions such as normal schools developed, providing access to higher education for some students unable to attend classical colleges. Yet these alternative institutions were challenged by scholars such as Henry Tappan (1851), who proposed to limit access by perpetuating an elite educated class. Tappan sought to regain the prestige of the university by only providing the most talented students with an opportunity to continue to their education. He also rejected the idea of forming numerous colleges due to his belief that resources should be devoted to a select few comprehensive universities. Access was also challenged by the growth of professional schools in higher education during the late 1800s (Burke, 1982). The idea of an egalitarian society seemed incompatible with the new industrial and economic structure of society. As an urban culture developed, a greater emphasis was placed on class distinctions. The growth of professional schools and associations, such as the American Bar Association, increased the importance of a college education for professional careers. Colleges were increasingly associated with social class status and obtaining a middle class lifestyle, and attendance remained limited to those from advantaged backgrounds.

Since only a small percentage of high school graduates attended college in the 1800s, the K-12 education sector developed independently of the higher education sector. The "common school" was formed in Massachusetts following the Revolutionary War to provide mass education in reading, writing, and computing (Glenn, 2002). These schools had both important civic and secular goals, as they sought to create national unity by teaching common values including democracy and liberty. Reformers such as Horace Mann were concerned that the great diversity of family backgrounds in the United States would lead to chaos if each religious or ethnic group was permitted to form its own

school, as many European countries allowed. In 1852, attendance at the common schools became compulsory as a way to protect children from any extreme viewpoints and to create a more unified society.

In 1892, the Council of Ten, led by Harvard President Charles Eliot, recommended creating a standardized system of college preparatory curriculum for secondary schools and standardized college admissions requirements (Oakes, 1985). The Council believed it was important for society that all people were well-educated, and proposed that students should not be placed into separate programs depending on whether they intended to pursue a college education after completing high school. Yet in the beginning of the twentieth century, the massive immigration movement and changes in the labor market led Americans to question how to most efficiently produce an educated citizenry. The practice of academic tracking became commonplace, as schools assigned students to curricular programs or courses purportedly based on interests and academic ability (Berends, 1995; Gamoran & Berends, 1987). Proponents of tracking viewed vocational education as a way to socialize immigrants about the values of hard work and supply trained labor to meet the needs of the expanding industrial workforce, while allowing schools to more efficiently allocate resources for advanced courses to only the most promising students. This process perpetuated the class structure in society by fostering status distinctions and rewarding students in the advanced tracks based on characteristics associated with their social backgrounds, thus legitimizing social inequality and further exacerbating disparities in access to higher education.

The early twentieth century also marked a period in which the spread of junior colleges began to proliferate as a way to provide further vocational training for students

who were perceived as inadequately prepared for four-year universities (Boswell, 2000). These junior colleges were often run by local school districts as a way to provide the thirteenth and fourteenth grade levels as an extension of traditional secondary schools. In 1947, President Truman's Commission on Higher Education submitted recommendations, known as *The Truman Report*, which called for the creation of a network of public community colleges that would serve a broader range of the population by providing both academic and vocational programs at little or no cost to the student (Thelin, 2004). These community colleges also took on a new role of facilitating transfers from two-year to four-year institutions, thus expanding access to traditional universities.

Between the 1950s and 1970s, the number of public colleges and universities expanded rapidly, and many states began to form statewide higher education governance structures to oversee these institutions (Venezia et al., 2005). During this time, there was also a movement of two-year colleges from the control of state boards of education to postsecondary governing boards. These new governance structures had very few interactions with K-12 agencies or governing boards. Although there were some regional and local efforts to unite the two systems, there were traditionally few state-level policies to support these attempts. As a result, today K-12 and higher education are subject to separate governance authority, regulatory requirements, and educational policies (Callan et al., 2006). In addition, most states have separate legislative committees and budgets for secondary and postsecondary education, which further impedes collaboration and coordination of policies between the two sectors.

Evidence of the Disconnect between K-12 and Higher Education

Although separate systems for K-12 and higher education may have been practical when only the social elite received a higher education, circumstances are different today as most jobs require at least some training beyond high school (Callan et al., 2006). Approximately 88% of eighth graders expect to obtain some form of higher education, and 70% of high school graduates enroll in postsecondary institutions within two years of graduation (Venezia & Kirst, 2005). Yet the historic governance divide that remains has led to a myriad of diverse and often conflicting policies and expectations between the two sectors. Evidence of this disconnect has been presented by numerous researchers; particularly those involved in the Bridge Project at Stanford University, which is "a national policy research study focused on the policies, perceptions, and practices related to the transition between high school and college" (Kirst & Bracco, 2004, p. 4). Areas of particular concern resulting from this governance divide include inconsistent course taking patterns and college standards, a confusing array of assessments, unequal opportunities for college preparation, and conflicting expectations between school teachers and college faculty.

First, high school course taking patterns are not consistent with college standards. Approximately 85% of college students in the United States are enrolled in "broad access" institutions that have minimal criteria for admissions beyond a high school diploma or GED (Kirst, 2005; Kirst & Bracco, 2004). These non-selective, two-year and four-year institutions usually have no academic course requirements for admissions, but may require students to demonstrate a certain level of proficiency before enrolling in non-remedial classes. The majority of students that attend these institutions have not

taken Advanced Placement courses or other classes that are articulated with college standards. Instead, they tend to complete the basic high school graduation requirements, often unaware that they will be unprepared for college-level work. This is particularly problematic at community colleges where up to 65% of students need some form of remediation (Kirst, 2005).

Second, there is a confusing array of assessments at the secondary and postsecondary levels. College placement tests such as the SAT and ACT are not aligned with K-12 standards, and differ in both format and content from K-12 assessments (Kirst, 2005). This differs dramatically from many European countries where a national end-of-school exam is also used for university entrance, providing clear expectations about the skills needed to attend national universities (Tucker, 2004). Furthermore, in the U.S., many state-mandated assessment tests at the K-12 level do not cover material learned beyond tenth grade. In particular, secondary math assessments often only include content up to Algebra I, failing to send a clear signal to high school students about the higher-level math skills needed to succeed in college (Callan et al., 2006).

Next, there are unequal opportunities for college preparation by social class, race, and parents' educational backgrounds. Even though secondary students tend not to be tracked into overarching curricular programs anymore, an "unremarked revolution" has occurred whereby students are tracked into differential courses (Lucas, 1999). This movement toward course-by-course track placement, despite its intentions for reducing the reproductive role of schools, has created a more hidden, within-school system of stratification as the information gap in course selection has increased. Students enrolled in college-preparatory courses, such as Advanced Placement (AP), gain a better

understanding of the expectations for college-level work and tend to receive stronger signals than their peers about preparing for college from teachers and counselors (Venezia & Kirst, 2005). Several studies at the state-level have found evidence that access to AP courses varies significantly by race and SES both between and within schools (Federman & Pachon, 2005; Klopfenstein, 2004; Teranishi, Allen, & Solorzano, 2004). There is also evidence that information about colleges is unequally distributed by social class (Kirst, 2005). Students and parents from low-income families are less aware of the academic preparation needed for college, policies for college entrance requirements or placement, financial aid processes, and admissions tests. High school counselors are often too busy to assist all students in making the transition to college and teachers tend to be unfamiliar with different admissions and placement policies.

Lastly, among school teachers and college faculty there are conflicting viewpoints regarding the importance of specific skills, as well as different expectations about student effort. For example, in California most high school English classes focus on literature, while community colleges emphasize grammar and writing, and the University of California system places a priority on rhetoric (Kirst, 2005). Even though all of these classes are for the subject of English, they are very different perceptions across institutions about the types of skills that are most important for students to develop. Instructors at different types of institutions also expect different levels of student effort. Most high school students are able to get by while completing little homework and are often surprised at the amount of work required to succeed in higher education (Kirst, 2005). The senior year of high school is particularly problematic because neither sector

provides an incentive for performance, often leaving students unchallenged academically in a period known as the "senior slump."

The P-16 Reform Movement

In 1983, the National Commission on Excellence in Education's report, *A Nation at Risk*, raised public awareness of problems with America's education system (Gordon, 2003; Kirst & Bracco, 2004). Emphasis on education at the state-level increased, and spurred interests in large-scale reforms and policy innovations in K-12 education including the creation of statewide academic content standards, assessments, accountability systems, and data monitoring practices. There were also some reforms in higher education (e.g. remediation policies), but there were few incentives in place to link efforts across the two sectors. As Venezia and Kirst (2005) note, "although college and university reformers seem to have often ignored K-12 reform efforts, K-12 reformers have often failed to look at changes in postsecondary education" (p. 268). This lack of collaboration has been cited as one of the primary reasons why reform efforts during this period were not successful at improving college preparation, as evident by the lack of significant progress in improving high remediation rates and low college completion rates (Callan et al., 2006).

Concerns about the disconnect between K-12 and higher education are not new. The issue first gained national attention by a series of reports published by the Carnegie Commission for Higher Education in the 1970s (Greenberg, 1991). In 1982, the Carnegie Foundation organized the first national meeting for K-12 school superintendents and college presidents, which was the earliest formal opportunity at the national-level to bring

together leaders from both educational sectors to discuss common concerns (Kirst, 2005). The need for greater collaboration was echoed by policy analysts, such as Hodgkinson's (1985) *All One System* report, yet no substantial P-16 reform efforts were developed during this time.

Researchers have noted numerous political, structural, and cultural barriers that have hindered progress in P-16 collaboration. *Politically*, there are no interest groups at the state or federal level that lobby for P-16 reform (Callan et al., 2006; Kirst & Bracco, 2004; Venezia & Kirst, 2005). Although states often encourage school-college collaborations, there has been a lack of leadership and interest in promoting statewide efforts. *Structurally*, there is no shared accountability to unite K-12 and higher education. Neither sector is held accountable for poor college preparation or transition problems (Kirst, 2005). Part of the reason this occurs is because it can be difficult to identify the source of problems with the transition to college, as well as responsibilities for these issues, if there are two separate systems of education. Another factor contributing to this problem is that most states fail to provide any incentives or sanctions for joint P-16 issues or outcomes. Most schools and universities receive the majority of their funding based on the number of students enrolled, rather than student outcomes or progress (Venezia & Kirst, 2005). There is also a perception of competition for funding between K-12 and higher education that discourages collaboration between the two sector (Boswell, 2000). *Culturally*, each group has its own established ways of doing things, and is resistant to change (Rochford, 2007). There are separate professional networks and associations, accompanied by an historic assumption that each sector should address its own problems (Kirst, 2005; Maeroff, Callan, & Usdan, 2001). There are also differences in autonomy

and leadership which make it difficult to create a common agenda (Greenberg, 1991). College faculty have more control over what they teach and the instructional materials they use, greater roles in decision making and institutional governance, and academic freedom guaranteed by tenured. There are also different leadership styles between the two sectors, with K-12 principals focusing more on day-to-day administration while college presidents emphasize long-term planning and development. In addition, colleges have more autonomy over spending from sources such as tuition and private donations.

Despite all of the barriers to cross-sector collaboration, a growing awareness of the need for P-16 reform began to develop in the 1990s due to increasing economic, demographic, and social pressures. A national recession in the early 1990s was accompanied by increasing Medicaid costs, new federal mandates, and voter initiated tax and expenditure limitations; bringing new fiscal challenges to state governments. These changes increased concerns about states' economic growth and competitiveness, as well as the high costs of public services such as college remediation (Callan et al., 2006; Maeroff, Callan, & Usdan, 2001). In addition, the upcoming mass retirement of the baby boom generation increased the demand for more highly qualified workers. This decade also marked a period of significant demographic shifts, with an increasing number of racial/ethnic minority, immigrant, and economically disadvantaged children attending public schools. These changes created social and educational challenges, as many states have been troubled by academic achievement gaps, as well as disparities in college participation and completion rates, among these different subgroups of students. Amid challenges to affirmative action policies, states also began to seek new ways to improve the pipeline of qualified minority students in higher education. Following the standards

and accountability movement of the 1980s and 1990s, P-16 collaboration seemed like the next logical step in improving state education systems. Information and support for P-16 reform began to spread from national organizations such as the National Governor's Association, Education Commission of the States (ECS), National Association of System Heads, the American Diploma Project (ADP Network) and the Bridge Project at Stanford University (Rochford, 2007).

The development of new joint organizational structures, known as statewide P-16 councils, has been one of the first widespread efforts at increasing cross-sector collaboration in many states (Maeroff, Callan, & Usdan, 2001). These councils have been formed through three primary methods: voluntary collaborations among leaders of state education agencies, executive orders of the governor, and legislative mandates. These types of P-16 councils are not mutually exclusive. In many states, informal councils formed through voluntary collaborations have later been formalized through executive orders or legislative mandates. Yet in almost all cases, the formation of statewide P-16 councils has been a "leader dependent" process, since it requires bringing together very separate systems and groups of actors (Rochford, 2007). One of the most prominent leaders in the formation of P-16 councils at the state-level has been the governor. Governors have become more powerful in the policy arena over the past several decades, and have placed an emphasis on education as a way of addressing state economic concerns (Herrington & Fowler, 2003). Even in the formation of voluntary P-16 councils, the governor has often been instrumental in bringing together members of K-12 and higher education state agencies, legislative committees, and the business community (Kettlewell, Kaste, & Jones, 2000). In other states, important leadership has come from

directors of state agencies. State agencies have also become more powerful over time as they have taken greater responsibility in the implementation of federal education policies (Herrington & Fowler, 2003). The Maryland P-16 Partnership was formed by the heads of the state's three educational organizations: the state university chancellor, state schools superintendent, and higher education secretary (Bowler, 2001). These directors perceived the lack of involvement from political leaders in the Partnership as an advantage because it facilitated a climate in which educators could lead. Finally, business groups seeking to improve the local workforce have also had an important role in encouraging P-16 collaboration. The earliest P-16 initiatives in Ohio can be traced back to The Education Enhancement Partnership (TEEP), a local group formed by philanthropic and business leaders in Stark County (Rochford, 2007). This partnership created an endowment to fund an organization to identify best practices for realigning the local education system. These efforts caught the attention of policymakers and led to the development of larger statewide P-16 efforts. Many of the most successful P-16 councils have been able to bring together leaders from the governor's office, state agencies, and the business community; especially those with political clout.

The Role of P-16 Councils and their Limitations

The formation of statewide P-16 councils has been similar to the state K-12 standards and assessment reform movement in that each state has developed its own unique series of practices, rather than creating similar policies (Rochford, 2007). Across states there is considerable variation in how the councils were established, who participates, what resources are available, whether the organization has any formal

authority, how often meetings are held, and what priorities are addressed. Yet all P-16 councils have a similar purpose to influence state policy in an effort to improve student achievement and transitions across all levels of education. Although most councils lack the authority to mandate their own policies, they are usually responsible for a variety of tasks including studying problems, developing responses, submitting recommendations to state policymakers, implementing new policies, and tracking the results.

Callan and his colleagues (2006) recommend four important statewide policy levers for improving P-16 collaboration; many of which have been advocated or developed by P-16 councils in their respective states. First, the quality, level of work, and expectations of coursework and assessments should be aligned across sectors. High school assessments should include skills needed for college, and students should receive feedback from these assessments about their level of preparation. For example, Governor Barbara Roberts of Oregon issued an executive order in 1993 for the state's Board of Education and the University System to engage in collaborative efforts (Graves, 2001). These agencies worked together to create a proficiency-based exam for high school students based on standards needed to succeed in college. This exam, known as the Proficiency-based Admissions Standards System (PASS), is also used for admissions at the state's public universities.

Second, there is a need for the development of more comprehensive data systems to track student progress from K-12 to higher education. One of the most comprehensive efforts is Florida's K-20 data warehouse, which links databases from K-12 education, higher education, workforce agencies, and correctional facilities (Callan et al., 2006). These databases are used to provide information that supports the state's accountability

and performance funding programs. Information has also been used by the state Department of Education to understand how student performance on the Florida Comprehensive Assessment Test (FCAT) in secondary schools relates to college participation and course-taking patterns.

Third, state finance systems should provide incentives for collaboration. Since most states have separate legislative committees and budgets for K-12 and higher education, there are few coordinated efforts across the two systems. In Oregon, the state's business council initiated the development of a K-20 finance model for the state by examining current spending per student by level from pre-school to graduate school, and recommending a more transparent funding system linked to outcomes at every level of education (Callan et al., 2006).

Fourth, states need to hold both sectors accountable for transition indicators including the percent of the school-age population completing high school prepared for college (readiness), percent enrolling in college (participation and access), percent staying in college (persistence), and percent graduating from college (completion). Instead, most K-12 accountability systems emphasize student performance on tests of basic skills learned up to tenth grade, while higher education accountability systems may reward goals such as institutional efficiency or faculty productivity (Venezia & Kirst, 2005). P-16 councils in Arizona, Florida, Indiana, Kentucky, Minnesota, Maine, and Missouri have all been involved in developing more comprehensive accountability policies that seek to improve the transition from K-12 to higher education (Rochford, 2007).

In addition to the primary policy levers mentioned above, P-16 councils have also been involved in initiatives such as pre-college outreach programs, early intervention services, dual enrollment policies[2], and coordination of teacher training and professional development. For example, Georgia's P-16 Initiative has developed the Postsecondary Readiness Enrichment Program (PREP) to provide tutoring, advising, and counseling to at-risk students in grades seven through twelve (Kettlewell, Kaste, & Jones, 2000); while Maryland's P-16 Partnership has brought schools and universities together to create professional development programs that help teachers better prepare students for college (Bowler, 2001). These types of programs may be particularly important for improving college access among traditionally underrepresented groups of students.

Limitations

Even though many P-16 councils appear to have made considerable progress in aligning their states' educational sectors, there can be serious limitations to the success of these types of organizations. In some states, P-16 councils have little role other than organizing discussions, and there are few incentives from financial or accountability systems to motivate coordinated efforts. As Callan et al. (2006, p. 20) note, "to be effective, K-16 commissions should be charged with substantive responsibilities in such areas as alignment and coordinating the development of data and accountability systems; they should be provided the requisite resources; they should have sufficient influence and authority to make real changes; and they should be held accountable for their own performance." One of the biggest challenges for P-16 councils has been changing

[2] Dual enrollment provides high school students with the opportunity to enroll in college-level courses for both high school and college credit.

attitudes among educators in both sectors in order to foster greater collaboration. In Oregon, both K-12 and higher education leaders have been reluctant to work together because they have different goals and do not want to share resources, which has resulted in slow progress (Graves, 2001). Similarly in Georgia, leaders of the P-16 Initiative claim that one of their most important roles is changing attitudes among college faculty who are skeptical of working with teachers, and proponents of local control in public schools who fear greater government intervention (Suggs, 2001). Thus even P-16 councils created with the best of intentions will only be successful if they are implemented effectively and able to gain the support of important constituents.

Another formidable challenge facing P-16 councils is the difficulty of maintaining progress after changes in political leadership or power struggles among key politicians. In Georgia, Governor Roy Barnes supplemented the work of the state's P-16 Initiative by signing legislation that required quarterly meetings of the leaders from each of the state's education agencies, known as the Education Coordinating Council (Rochford, 2007; Venezia et al., 2005). Even though the Council flourished under Governor Barnes, it ceased its formal activities in 2003 after Governor Sonny Purdue was sworn into office. In Florida during 2001, Governor Jeb Bush led an initiative to eliminate the Board of Regents and place authority for all levels of education with a reorganized State Department of Education focused on K-20 education (Venezia et al., 2005). Yet the following year, Senator Bob Graham sponsored an amendment to the state's constitution that created a new Board of Governors to oversee the State University System; despite opposition from Governor Bush. This has created considerable confusion among the two

agencies regarding who has authority over what issues, and has purportedly made collaboration between K-12 and higher education more difficult (Rochford, 2007).

Despite the challenges and limitations that P-16 councils might face, it is still important for states to have a structure in place to facilitate coordinated policy efforts across educational sectors (Venezia & Kirst, 2005). Although there are other reasons why students may not go to college (e.g. affordability or family obligations), the disjuncture between K-12 and postsecondary systems is one major issue that is often overlooked (Kirst & Bracco, 2004). Thus, even though P-16 councils may not be the panacea for all state-level educational problems, they represent an important step in the right direction. And yet, it is a step that little is known about. Most of what we do know about the formation of statewide P-16 councils has come from anecdotal evidence or individual cases studies. This study will seek to systematically examine the organizational structures, political leadership, and environmental conditions that have facilitated or hindered the spread of P-16 councils across the fifty states, thus contributing substantively to our knowledge of P-16 reform and conceptually to the literature on state policy innovation in the relatively new context of network formation.

CHAPTER III

CONCEPTUAL FRAMEWORK

Although the majority of public policy research in education focuses on understanding the *effects* of various policy levers, the study of *antecedents* to education policy adoption has recently emerged as an important area of substantive and theoretical interest. This chapter will begin by discussing traditional frameworks used to explain the policy adoption process in the American states, which has primarily developed from the discipline of political science. A comprehensive review will be provided of how these frameworks have been applied in the literature on state policy adoption in both K-12 and higher education. This section will also summarize common political, economic, demographic, organizational, educational, and geographic influences that have contributed to the adoption of educational policy innovations in the American states. Next, network theory will be proposed as a new framework for understanding the complex process of state adoption of P-16 councils. This framework will be used to distill three sets of hypotheses to predict how different organizational structures, leadership influences, and characteristics of the state environment may affect states' decisions regarding the formation of P-16 councils.

Traditional Frameworks of the Policy Process

While the majority of early studies on American politics focused almost exclusively on the federal government, scholarly interests in comparative state politics

emerged around the 1950s and 1960s (e.g. Dawson & Robinson, 1963; Key, 1956). Political scientists realized that the ability to make comparisons could help them to understand complex social phenomena such as policy outcomes. The U.S. federal government could not be easily compared to other countries due to the diverse political systems, cultures, languages, economies, and histories; which made it difficult to isolate important explanatory predictors of policy outcomes. The governments of the American states, however, provided 50 different comparison groups which were all part of the U.S. federal system and shared common institutional and cultural characteristics, governmental structures, language and history. The remaining natural variation in economic, social, and political factors across the fifty states could be used to examine differences in state government outputs. These state-level characteristics, known as *intrastate determinants*, represent factors internal to individual states that may influence policy outcomes.

Early research of state policy outcomes focused almost exclusively on outcomes relating to the level of expenditures that states allocated to different public services (e.g. Dawson & Robinson, 1963; Dye, 1966; Hofferbert, 1966). State budgets were seen as the primary way in which governments affected policy, and also signified the importance of the different values held by political actors and the society they represented. These early studies used statistical correlations to understand how political and economic characteristics were associated with variations in state spending for different budgetary items. The political variables examined commonly consisted of partisan control of the government, inter-party competition, and malapportionment; while economic variables included per capita income, urbanicity, and the percentage of the workforce involved in

non-agricultural employment. Collectively, the findings indicated that the majority of the variation in state spending outcomes was associated with socioeconomic factors rather than political characteristics, although there were often high inter-correlations between socioeconomic and political variables that could not be separated. As Dye (1966, p. 293) concluded, "economic development shapes both political systems and policy outcomes, and most of the association that occurs between system characteristics and policy outcomes can be attributed to the influence of economic development. Differences in the policy choices of states with different types of political systems turn out to be largely a product of differing socioeconomic levels rather than a direct product of political variables."

One of the early criticisms of these types of comparative state policy studies was that the outcomes were too narrowly defined, as researchers presumed that expenditure levels were the only area of policy worth studying (Gray, 1973; Sharkansky, 1967; Walker, 1969). Yet another important function of state governments was to adopt new statewide policies through the legislative process. The fifty states represented "laboratories' for policy experimentation by creating different types of policies and programs to meet the needs of their citizens. Variation across states in terms of whether certain policies were adopted and the level of policy innovation could also be studied to understand differences in state government outcomes. Another criticism was that much of the variation in state policy outcomes remained unexplained in many of these early studies. This was a concern empirically, due to the small R-squared values and correlation coefficients of many studies; as well as substantively since the presence of

certain economic indicators seemed too simplistic to fully explain the complex process of government outputs.

In 1969, Walker addressed both of these criticisms and offered an alternative explanation for differences in state policy outcomes. He examined 88 programs in different policy arenas (e.g. welfare, taxes, and education) to identify *innovations*, or policies that were new to the states that adopted them. Using factor analysis, he developed a score for innovativeness in each state which was used to uncover patterns in state adoption of new policies over time. Walker proposed that in addition to the influences of internal determinants of the states, differences in policy outcomes could be explained by a geographically based process of innovation known as *interstate diffusion*. He observed that once a regional trendsetter adopted a new policy, other states in the same region appeared to emulate their neighbors by adopting similar policies. The conceptual rationale for this process was based largely on the works of organizational theorists such as Simon, March, and Cohen. The basic idea was that organizations, including state governments, have bounded rationality which limits their ability to maximize the benefits they would receive from different courses of action. As a result, they make the best decision available given the constraints of resources such as time and information. One way that state governments may maximize decision making when considering new policy initiatives is to mimic successful policy solutions pursued in other states to solve similar problems. This process of mimicry may also allow states to gain a competitive advantage, or avoid a competitive disadvantage, by conforming to nationally or regionally accepted standards (Berry & Berry, 2007).

The notion that both intrastate determinants and interstate diffusion contributed to differences in state policy outcomes was difficult to test empirically during Walker's time. Yet the study of policy innovation and diffusion was reinvigorated in the 1990s when Berry and Berry (1990) applied the methodological technique of event history analysis (EHA) to the study of the adoption of state lotteries over time. They found that intrastate influences such as the proximity of elections, fundamentalism, and partisan strength of the legislature; as well as interstate influences of neighboring states with similar policies, both affected the likelihood that a state would adopt a new lottery program in a given year.

Since Berry and Berry's groundbreaking study, numerous researchers have used event history analysis in the study of policy innovation and diffusion in the American states. These types of studies often rely on a variable for the number or percent of neighboring states that had previously adopted the same type of policy as an indicator of regional diffusion (e.g. Boehmke & Witmer, 2004; Chamberlain & Haider-Markel, 2005; Mintrom, 1997). A review of the literature by Mooney (2001) indicated that only half of 24 published empirical studies on state policy innovation found a significant effect of regional diffusion. Two of these studies found a significant *negative* effect of diffusion, and five additional studies had not properly controlled for the passage of time so the findings may have been completely spurious. As Karch (2007) suggests, successful policy ideas may be more likely to spread today regardless of geographic proximity due to the proliferation of professional associations, national news media, and electronic communication networks. Several recent studies have attempted to address this concern by trying different methods of operationalizing diffusion. For example, Grossback,

Nicholson-Crotty, and Peterson (2004) examined the number of states with similar ideological positions that had previously adopted a policy and found that states tend to mimic other states with similar values, regardless of geographical proximity. In addition, McNeal et al. (2003) found some evidence of the effect of a state's participation in professional networks on policy innovation by including a variable for whether state officials had a leadership role in the National Council of State Legislatures (NCSL) or the National Governor's Association (NGA). Their findings suggested that policy ideas may diffuse nationally through professional organizations. Although these newer indicators may provide additional insight into the sources of policy diffusion, researchers are still unable to empirically test for all of the different non-geographic ways in which policy ideas may spread (Karch, 2007).

State Policy Innovation in Education

The majority of state policy innovation studies in the field of education have used a traditional framework based on the influences of intrastate determinants and interstate diffusion. A review of the literature identified fifteen different empirical studies of state adoption of new policies in both K-12 and postsecondary education. Collectively these studies indicate the importance of a wide variety of influences including political, economic, demographic, organizational, educational, and geographic factors. These findings are discussed below and summarized in Table 1.

Among the various political influences, partisanship is one of the most widely tested and commonly significant findings among studies of state education policy adoption. Research has indicated that members of the different political parties may have

different preferences and values for educational issues such as higher education opportunity and efficiency (Doyle, 2007). These differences in values are also likely to translate into differences in policy outcomes, as evident by numerous studies of education policy innovations. The percent of Republicans in the state legislature or unified Republican control of the legislature has been positively associated with the adoption of tuition centralization policies (Deaton, 2006), performance funding policies in higher education (McLendon, Hearn, & Deaton, 2006), postsecondary financing innovations (McLendon, Heller, & Young, 2005), dual enrollment policies (Mokher & McLendon, Forthcoming), and strong charter school laws (Renzulli & Roscigno, 2005). Republican partisanship has also been negatively associated with K-12 accountability policies (McDermott, 2003), higher education governance reforms (McLendon, Deaton, & Hearn, 2007), and performance budgeting policies in higher education (McLendon, Hearn, & Deaton, 2006).

Several other important political influences include government or citizen ideology (Doyle, McLendon, & Hearn, 2005; Hearn, McLendon, & Mokher, 2009), electoral competition (Doyle, McLendon, & Hearn, 2005), governor tenure (McLendon, Deaton, & Hearn, 2007), the presence of an election year (Mintrom, 1997; Mintrom & Vergari, 1998; Rincke, 2004), and governor partisanship (Rincke, 2004; Wong & Shen, 2002). Although few studies have tested for the influence of interest groups, the presence of large teacher's unions and union opposition has been associated with a decrease in the likelihood of a state adopting school choice legislation (Mintrom, 1997; Mintrom & Vergari, 1998) and strong charter school laws (Renzulli & Roscigno, 2005).

Table 1

Significant Political, Economic, Demographic, Organizational, Educational, and Geographic Factors in Studies of State Adoption of Education Policies

Citation	Outcome	Political	Economic	Demographic	Organizational	Educational	Geographic
Deaton, 2006	Tuition policies a) Tuition centralization b) Tuition decentralization	+ % Republican legislature (a)	+ Per capita income (b)		+ Coordinating board-budget authority (a) + Coordinating board-no budget authority (b)	+ Scholarship program (a)	- Regional diffusion (a)
Doyle, 2006	Broad-based merit aid program		+ Median family income	- % Population age 18-24 - Educational attainment		- College continuation - College out-migration	- Regional diffusion
Doyle, McLendon, & Hearn, 2005	a) Prepaid tuition b) College savings plan	+ Government liberalism (a,b) - Electoral competition (a,b)			- Centralized governing board (a,b)		- Regional diffusion (a)

Table 1 (Continued)

Citation	Outcome	Political	Economic	Demographic	Organizational	Educational	Geographic
Hearn, McLendon, Mokher, 2008	Student Unit Record (SUR) systems	+ Citizen ideology		+ Total state population + % Population age 18-24		- % Enrolled in private institutions + Litigation for segregated colleges	
McDermott, 2003	K-12 accountability policies a) Identification of underperforming schools b) Takeover or reconstitution power c) Power to replace school staff	+ Democrat partisanship-Erikson scale (a,b,c)		+ % School age population (a)	+ SEA capacity (a)	- NAEP scores (b) - Spending per pupil (b)	+ Southern states (b)
McLendon, Deaton & Hearn, 2007	Higher education governance reforms	+ Unified legislature - Governor tenure - % Change Republicans					- Regional diffusion

Table 1 (Continued)

Citation	Outcome	Political	Economic	Demographic	Organizational	Educational	Geographic
McLendon, Hearn & Deaton, 2006	Performance accountability policies (higher ed) a) Performance funding b) Performance budgeting	+ % Republican legislature (a) - % Republican legislature (b)			- Consolidated governing board (a) + Consolidated governing board (b)		
McLendon, Heller & Young, 2005	Policy Innovations a) Any innovation b) Accountability innovation c) Financing innovation	+ Republican control of legislature (a,c)	+ Median income (a,b)	+ Total state population (a,c)	- Weak higher education board (c)		+ Regional diffusion (a,b,c)
Mintrom, 1997; Mintrom & Vergari, 1998	School choice a) Legislative consideration b) Legislative approval	- Election yr (a) + Policy entrepreneur (a,b) - Union opposition (b)				+ % Private schools (a) - Change in test scores (b)	+ Regional diffusion (a)
Mokher & McLendon, Forthcoming	Dual enrollment policies	+ Unified Republican legislature		+ Total state population	+ Consolidated governing board	+ % Enrolled in 2 -yr colleges + Voucher laws + Merit aid program	

Table 1 (Continued)

Citation	Outcome	Political	Economic	Demographic	Organizational	Educational	Geographic
Renzulli & Roscigno, 2005	Charter school legislation a) Adoption of any law b) Adoption of strong charter law c) Adoption of weak charter law	+ % Republican legislature (b) - % NEA or AFT (b)	+ Median family income (c)	+ % Non-white students (a,b,c)		+ Open enrollment (a,b) - % Private schools (c)	+ Regional diffusion (a,c) - Midwest or West region (b)
Rincke, 2004	Charter school legislation	+ Republican governor + Election year state House		+ % Minority population			+ Regional diffusion
Warren & Kulick, 2006	High school exit exam policies		+ % Population unemployed	+ % Black-age 14-21 yrs + % Hispanic-age 14-21 yrs			
Wong & Langevin, 2005	K-12 governance reforms a) State takeover reform b) Charter school law		- Fiscal health (a)	+ Log of student population (a,b)	- Local revenue share (a)		+ Regional diffusion (a)
Wong & Shen, 2002	K-12 governance reforms a) State takeover reform b) Charter school law	- Non-election year (a)		+ Total state population (a)		- High school completion (b)	

Note. Positive or negative signs preceding the variable name indicate the direction of the effect. Multiple outcomes from a single study are identified by letters (a,b,c). These letters are in parentheses next to the corresponding significant variables in each study.

Among the demographic factors, both the size and racial/ethnic characteristics of the population are commonly associated with state adoption of new education policies, which may reflect states' responses to the demands of their citizens. Large total state populations or high percentages of traditional school or college-age populations have been associated with the adoption of student unit record (SUR) systems[3] in higher education (Hearn, McLendon, & Mokher, 2009), K-12 accountability policies to identify underperforming schools (McDermott, 2003), postsecondary financing innovations (McLendon, Heller, & Young, 2005), and K-12 governance reforms (Wong & Langevin, 2005; Wong & Shen, 2002). Racial and ethnic characteristics of the population may represent another important consideration for state policymakers seeking to improve educational opportunities for traditionally disadvantaged groups of students. The percentage of racial and ethnic minorities among the total population and sub-group of school-age students has been associated with an increased likelihood of the adoption of multiple types of charter school legislation (Renzulli & Roscigno, 2005; Rincke, 2004), as well as the enactment of new high school exit exam policies (Warren & Kulick, 2007).

Organizationally, the structure and level of centralization of the educational governance structures in the state tends to influence the types of educational policies that are adopted. In K-12 education, the share of educational revenues from local sources is commonly used as an indicator of the amount of local control in the educational system. States with a low percentage of revenues from local sources may be less insulated from state control, which may make it easier for states to implement policies like state takeover reforms that reduce the authority of local districts (Wong & Langevin, 2005). In addition,

[3] A student-unit record system is an integrated data system containing core IPEDS student data at the individual level and giving a state the capability to track students across at least the public postsecondary institutions in the state.

states with high levels of capacity from the state education agency (as indicated by the number of SEA staff per school district) may also have more centralized education systems, which increases the likelihood of educational innovations such as K-12 accountability policies for identifying underperforming schools (McDermott, 2003).

The structure of postsecondary governance systems within a state ranges from coordinating boards, which provide oversight among one or several public institutions in the state; to consolidated governing boards, which tend to have centralized authority over most or all of the institutions in the state. States with more centralized postsecondary governance structures may have greater analytic resources to try new policy innovations, and are more likely to adopt prepaid tuition and college savings plans (Doyle, McLendon, & Hearn, 2005), performance budgeting policies (McLendon, Hearn, & Deaton, 2006), and dual enrollment programs (Mokher & McLendon, Forthcoming). The type of authority given to postsecondary governance structures may also affect policy outcomes, as Deaton (2006) found that coordinating boards with budgetary authority were more likely to adopt tuition centralization policies, while coordinating boards without budget authority were more likely to adopt tuition decentralization policies.

Characteristics of the education environment may also influence education policy innovation, as states may look to new initiatives to improve poor educational performance at both the K-12 and postsecondary levels. States with low levels of high school completion or college continuation rates are more likely to adopt charter school laws (Wong & Shen, 2002) and broad-based merit aid programs (Doyle, 2006). Low test scores or lack of improvement in test scores have also been associated with new K-12 accountability policies for takeover or reconstitution power (McDermott, 2003) and

school choice legislation (Mintrom, 1997; Mintrom & Vergari, 1998). In addition, the distribution of students among different sectors of education may influence policy outcomes. In K-12 education, high percentages of students enrolled in private schools may represent state demand for alternative educational services, and has been found to increase the likelihood of legislative consideration for school choice (Mintrom, 1997; Mintrom & Vergari, 1998) and decrease the likelihood of adopting weak charter school laws (Renzulli & Roscigno, 2005). In higher education, enrollment in private institutions has a negative effect on the adoption of student unit record systems, indicating that private institutions may serve as an interest group that seeks to maintain autonomy and privacy (Hearn, McLendon, & Mokher, 2009). Also, enrollment in public two-year institutions may represent an important interest group among community colleges in the promotion of dual enrollment policies, as these types of institutions tend to particularly benefit from these programs through increased enrollments and new sources of revenue (Mokher & McLendon, Forthcoming).

Lastly, the evidence of geographic influences through regional diffusion remains mixed in the education policy innovation literature. Although several studies found a positive effect of regional diffusion, almost all of them examined similar outcomes related to school choice innovations (Mintrom, 1997; Mintrom & Vergari, 1998; Renzulli & Roscigno, 2005; Rincke, 2004; Wong & Langevin, 2005). The only exception was McLendon, Heller, and Young's (2005) study, which found that postsecondary policy innovations relating to accountability or financing were more likely to diffuse among geographic neighbors. Interestingly, a number of studies found a significant *negative* effect of regional diffusion (Deaton, 2006; Doyle, 2006; Doyle, McLendon, & Hearn,

2005; McLendon, Deaton, & Hearn, 2007), which many researchers have struggled to interpret. Although there is no clear explanation for these findings, it is possible that regional diffusion influences may not exist for these types of policies, or that states have avoided implementing policies that appear to be problematic in neighboring states (Doyle, McLendon, & Hearn, 2005).

Overall, the findings from these fifteen studies indicate that a variety of different types of internal determinants may influence the adoption of educational policy innovations, while the evidence on interstate diffusion remains mixed. The specific educational policies pursued depend largely on the political, economic, demographic, organizational, and educational characteristics in each state. However, the direction of the effect of each of these factors also may vary depending on the type of policy. For example, strong economic conditions may be associated with greater policy experimentation among more costly initiatives, while weak economic conditions may encourage states to implement new policies to ensure the efficient use of resources. Since certain variables may be significant predictors of some policies but not others, it is important to consider the specific context and implications of each policy innovation under investigation.

Network Theory

One of the primary criticisms of traditional studies of state policy innovation is that many models fail to identify the processes underlying *how* internal determinants or interstate diffusion affect policy outcomes. Yet developing a theoretical framework to explain these processes is no easy task. As Sabatier (1999, p. 4) notes, "understanding the

policy process requires a knowledge of the goals and perceptions of hundreds of actors throughout the country involving possibly very technical scientific and legal issues over periods of a decade or more when most of these actors are actively seeking to propagate their specific "spin" on events." As a result of this complexity, the field has yet to develop a comprehensive theoretical framework to fully explain the policy process, although some progress has been made in the use of theory for understanding coherent sets of relationships and guiding the selection of important explanatory variables. Yet many important developments, such as the multiple streams framework (Kingdon, 1984) and the advocacy coalition framework (Sabatier & Jenkins-Smith, 1999), may be better suited for understanding the process of *policy agenda setting* rather than the process of *policy adoption*. In addition, these frameworks tend to rely on the use of case studies, which makes it difficult to identify common factors that facilitate or impede the spread of new policy innovations across all fifty states.

Network theory is a framework that has not traditionally been used in empirical studies of state policy innovation, yet it may provide useful insight into the processes underlying complex outcomes such as state adoption of P-16 councils. The organizational structure underlying public policymaking has been described as a "network" consisting of "patterns of two or more units, in which all the major components are not encompassed in a single hierarchical array" (O'Toole & Meier, 2000, p. 266). The nodes within these networks can consist of individuals, organizations, hierarchies within organizations, and/or other units within organizations. Networks are commonly formed to collaborate on problems that cannot be solved by any one organization alone, and the connections among members can be both formal and informal (Arganoff & McGuire, 1998; Milward

& Provan, 2000). Network theory has been developed from a number of diverse fields, including organizational sociology, business and management, public administration, and new institutional economics (Powell, 1990).

The primary difference between networks and traditional organizational structures is the lack of superior-subordinate relationships subject to formal authority (Milward & Provan, 2000; O'Toole & Meier, 2000). The behavior of network members is not orchestrated through a hierarchical chain of command, and legally binding contracts tend to be replaced by social obligations. The underlying mechanism for collaboration among network members is the development of shared norms and values. Members of the network are held together because they unable to achieve their objectives alone. Yet due to the loosely coupled nature of network structures, members may not be directly aware of their interdependence with other units. Network leaders can play an important role in increasing awareness of common interests, and developing shared norms and values among members. This process occurs by management through consensus building rather than authoritative control. The structure and centralization of the network also influences the ability of groups to collaborate effectively (Arganoff & McGuire, 1998; Jones, Hesterly, & Borgatti 1997). These organizational characteristics may have an effect on the network's *structural embeddedness*, or the number of interactions between members and the amount of information shared across the network. As Jones, Hesterly, and Borgatti observe, "structural embeddedness provides the basis for social mechanisms to adopt, coordinate, and safeguard exchanges; thus its presence enhances the likelihood of a network governance emerging and thriving" (p. 925). As a result of these repeated

interactions over time, networks develop social control through occupational socialization, collective sanctions, and reputation.

There are different types of networks for a variety of purposes including: policy networks for forming and implementing public policy, resource exchange networks that seek and share resources among members, project based networks that come together temporarily to work on specific projects, and professional networks among individuals working in the same occupation, (Arganoff & McGuire, 1998; Smith & Wohlstetter, 2001). Kirst, Meister, and Rowley (1984) were among the first researchers to introduce the idea of policy issue networks in the education reform arena. They noted that major education reforms are not subject to the traditional "iron triangle" of policymaking between interest groups, legislative committees, and agency representatives. Rather, they are influenced by a larger environment outside of government involving numerous participants with some level of shared commitment and interests. Case studies of four education initiatives in six states revealed a diverse network of members involved in agenda setting for education reforms, which included corporations, religious groups, teachers' unions, and the general public. These members played several different roles in the agenda setting process, such as providing financial resources, raising awareness of problems, distributing information, and influencing lawmakers.

More recently, network theory has been used in the field of education to understand how differences in the organization of networks involving school districts, education agencies, and policymakers influence outcomes such as student achievement and the quality of education policies. Meier and O'Toole (2000) examined how leaders divide their time between internal management of their units and externally among other

units in the network by surveying superintendents in Texas about their time and efforts spent with school board members, business leaders, other superintendents, state legislators and the state education agency. They found that the percentage of students in the district passing the state's standardized tests in reading, writing, and math was higher when superintendents engaged in greater network interaction. The authors posit that networks may increase awareness of innovative policies and ideas in other districts that may improve student achievement; create buffers from other influences in the external environment that allow teachers and principals to be more effective; or influence external stakeholders to provide the district with more autonomy if the superintendent is taking an active role in involvement with the external community.

In another study, Manna (2006) examined whether more centralized education networks were associated with higher student achievement scores on the NAEP assessment, as well as higher EdWeek quality ratings for state accountability and teacher training policies. He hypothesized that states where the governor appointed State Education Agency (SEA) chiefs and board members would have better educational outcomes because the governor would be able to control and transmit clearer messages, interest groups would face greater difficultly advancing their narrow interests, and the public could hold the governor more accountable due to greater centralized control over institutional resources. Manna found some support for his hypotheses, with higher student achievement in states where the governor appointed state education chiefs, and higher quality state-level teacher policies if the governor appointed board members. However, states where the governor appointed both board members and chiefs tended to have lower levels of student achievement. The author proposes that it may be better for

student achievement to have the governor appoint SEA chiefs, while state board members in charge of day-to-day management may need more independence from governors.

While networks for public services traditionally include policymakers, relevant state agencies, and their service providers; there has been a recent movement toward another type of network known as "joined-up government" which occur when diverse agencies and levels of government come together to provide public services. This type of network "entails dismantling the stovepipes so prevalent in hierarchical government and enabling agencies to better share information and coordinate their efforts" (Goldsmith & Eggers, 2004, p. 15). One example of a joined-up government network is the state of Colorado's recent initiative to unite separate agencies for law enforcement, prosecution, courts, adult corrections, and juvenile corrections into one criminal justice information system. This type of joined-up government network has become more common as the environment has become more complex and boundaries between local and external powers have become more fluid, requiring greater flexibility than traditional hierarchical models of government.

The formation of P-16 councils can also be conceptualized as a movement toward joined-up government networks. As with other networks, joined-up government involves both vertical and horizontal interactions (Arganoff & McGuire, 1998). Vertical interactions typically consist of hierarchical connections within state or federal government, while horizontal interactions may occur among local governments, organizations, and agencies that engage in local activities. In the formation of P-16 councils, the State Department of Education may be involved in vertical interactions with districts and schools by implementing reform initiatives and providing oversight of

organizational activities. The State Department of Education is also likely to engage in horizontal interactions with agencies such as the Higher Education Commission, as each agency lacks the authority to direct the behavior of the other. P-16 councils may also gain the support of other external groups that share similar interests, such as business and community members concerned about economic and workforce development. Together these network members can share information and resources to influence public policy in the state.

Hypotheses

In this study, network theory will be used as a central organizing theory to distill three sets of hypotheses to predict how different organizational structures, leadership influences, and characteristics of the state environment may affect states' decisions regarding the formation of P-16 councils. Within this broad theoretical framework, the hypotheses will be supported by three main bodies of literature and research: (1) the comparative state politics literature, particularly as it relates to the role of governors in agenda setting and state policy formation; (2) the growing literature on state policy adoption in both K-12 and higher education; and (3) the literature on educational governance in both sectors. An overview of the major theoretical constructs and corresponding variables is provided in Table 2.

Table 2
Overview of Theoretical Framework and Proposed Variables

Construct from Network Theory	Proposed Variables
Organizational structures: Ability of groups to collaborate depends on the number of units involved and the centralization of authority among the units in the network.	- Share of K-12 funding from state sources - Consolidated governing board (postsecondary)
Leadership influences: A "network designer" is needed to bring together the different parties and stakeholders in a network. Effective management relies on both the personal characteristics of the leader and the level of congruence between the leader's interests and those of the other units in the network.	- Percent of governor's agenda on education - Institutional powers of the goveror to appoint members of the state board of education and the higher education governing board - Governor's personal powers - Governor leadership in professional networks - Gubernatorial election year
Environmental characteristics: Influences from the surrounding environment may either stimulate change or buffer the network against change.	- Percent of state jobs requiring a bachelor's degree or higher - Unemployment rate - Chance for college by age 19 - Total population

While there are numerous other factors that could be hypothesized to influence a state's decision of whether to form a P-16 council**,** the number of variables that can be included in the final empirical model is limited. The variables that have been selected represent coherent sets of influences that may be among the most likely to affect P-16 policy outcomes, based on the conceptual framework provided by network theory and evidence from other comparative state politics studies of policy innovation. However, two commonly tested influences among other studies of educational policy adoption have not been included here: partisanship and ideology. These variables are not hypothesized to affect the decision of whether to form a P-16 council because these organizational structures can be utilized for a variety of different purposes to meet the objectives of numerous different groups. For example, while some P-16 councils prioritize outreach programs for disadvantaged minority groups, others promote policies such as dual

enrollment which may disproportionately benefit middle and upper-income white students (Morest & Karp, 2006; O'Brien & Nelson, 2004). Thus, characteristics such as partisanship and ideology may be better suited for understanding the type of initiatives pursued by P-16 councils, rather than the initial decision of whether to form one of these network organizations.

Organizational Structures

Network theory suggests that the ability of groups to collaborate depends on the number of units involved and the centralization of authority among the units in the network (Milward & Provan, 2000; O'Toole & Meier, 2000). Networks with a large number of units are more complex because there is greater uncertainty regarding who has power and what sources of information to trust. Similarly, in networks consisting of highly decentralized organizations, there are multiple sources of management which may emphasize different priorities and perspectives. In addition, more decentralized networks provide fewer opportunities for direct relationships among members which may hinder the development of shared norms and values.

The first set of hypotheses will examine how the size and centralization of the K-12 and higher education systems within a state may affect the likelihood of forming a P-16 council. These are important organizational characteristics that may influence the formation of P-16 councils, as leaders of state agencies will have greater control in more centralized educations systems because there tend to be fewer competing influences and less uncertainty about state priorities. In the K-12 literature, the percentage of educational funding from state sources is commonly used as an indicator of the level of

state centralization and control of the state's K-12 education system (e.g. Manna, 2006; McDermott, 2003; Meier & O'Toole, 2000; Mintrom & Vergari, 1998; Wong & Langevin, 2005). Financing public K-12 schools is a joint responsibility of federal, state and local governments. The state government usually plays the largest role in financing public K-12 education, but there is considerable variation across states in the relative share of funding from different sources. A study by Meyer, Scott, and Strang (1987) found that higher shares of educational funding from state sources is associated with less administrative complexity within school districts, thus "reflecting the legitimated and integrated state control over public education" (p. 186). Local funding may increase environmental complexity through the addition of local political pressures. Federal funding tends to create greater additional administrative burdens on state and local organizational structures, thus resulting in even more fragmented and complex environments. Manna (2006) also hypothesized that fewer influences from federal and local government funding may lead to less fragmented educational networks. He found that a higher percentage of educational funding from federal sources is associated with lower quality policies for accountability and teacher training. These findings suggest that when there is greater federal intervention, it may be harder for states to govern their educational systems due to the more complicated policy environment.

> *Hypothesis 1: States with more centralized control over the K-12 system, as indicated by higher shares of educational revenues from state sources, will be more likely to form P-16 councils.*

In the higher education literature, the structure of the state's postsecondary governing board is commonly used as an indicator of the level of centralization of the public higher education system (e.g. Hearn, Griswold, & Marine, 1996; Knott & Payne, 2003; McLendon, Hearn, & Deaton, 2006; Nicholson-Crotty & Meier, 2003). At one end of the governance spectrum are voluntary coordinating boards, which are highly decentralized structures consisting of a series of boards from local institutions. These types of governance structures are most common in states like Michigan where public universities have constitutional autonomy and the state has little authority over the governance of individual institutions. At the other end of the spectrum are consolidated governing boards, which eliminate local boards to create a single governing board for all public institutions in the state. Consolidated governing boards maintain control over day-to-day management decisions for all institutions and are considered to be the most autonomous and centralized form of state postsecondary governance structure. The responsibilities of consolidated governing boards may include academic program review and approval, appointment of chief executives, development and implementation of policies on issues such as faculty personnel, allocation of resources between institutions, and establishment of tuition and fees.

The centralization of the postsecondary governance structures may influence the adoption of statewide P-16 councils in two ways. First, more centralized governing boards have an advantage in implementing and monitoring policies that are the same across all institutions (Toma, 1986). Leaders within these organizations may perceive fewer barriers to aligning postsecondary and K-12 policies if each university does not have its own disparate policies and competing perspectives from different sources of

management. Second, more centralized governing boards tend to have greater analytic and personnel resources, which increases the availability of information about policy solutions and fosters policy innovation (Hearn & Griswold, 1994; McLendon, Hearn, & Deaton, 2006; McLendon, Heller, & Young, 2005). Consolidated governing boards have been associated with the spread of P-16 and postsecondary education innovations including performance budgeting accountability plans (McLendon, Hearn, & Deaton, 2006), dual enrollment policies (Mokher & McLendon, Forthcoming), and regulatory postsecondary reform innovations (Hearn & Griswold, 1994).

> *Hypothesis 2: States with consolidated governing boards will be more likely to form P-16 councils than states with less centralized forms of postsecondary governance structures.*

Leadership Influences

The second set of hypotheses relate to leadership since a "network designer" is needed to bring together the different parties and stakeholders in a network. These hypotheses may be particularly important for understanding the spread of mandatory P-16 councils that are initiated by executive orders of the governor or legislative statutes, as additional leadership on behalf of elected officials is needed to prioritize the issue on the state policy agenda. The network organizer "acts as the "hub" and often is the only entity with links to all the other network participants" (Goldsmith & Eggers, 2004, p. 75). This leadership is needed to create change because individuals within independent organizations are often too involved in maintaining day-to-day operations to initiate new collaborative efforts on their own (O'Toole & Meier, 2000). Since K-12 and higher

education have traditionally operated under separate governance systems, external leadership is almost always required to bring the two sectors together (Boswell, 2000).

There are no significant interest groups for P-16 education (Callan et al., 2006; Kirst & Bracco, 2004), so political leaders have commonly been responsible for initiating P-16 collaboration. In ten states, governors have played a direct role in creating P-16 councils through executive orders, while in other states governors have played an indirect role in encouraging the establishment of P-16 councils through voluntary collaborations (Kirst, 2005). The responsibility of governors in facilitating P-16 efforts is not surprising, given that the rise of "education governors" over the past several decades has been posited to have played an increasingly important role in the initiation of education reform efforts. Indeed, governors have been identified as the most important actors in influencing a variety of educational issues such as vouchers, state standards, affirmative action, college affordability, and postsecondary governance reforms (Gittell & Kleiman, 2000; Gittell & McKenna, 1999; McLendon & Ness, 2003). In the past decade, governors have become even more powerful in the education arena by increasing coalitions with the business community and important interest groups (Gittell & McKenna, 1999), thus making "education governors" ideal leaders for initiating statewide P-16 networks with diverse constituents. The effectiveness of governors in promoting these initiatives may depend on the extent of shared interests between the governor and state agencies, the governor's personal leadership traits, and the availability of professional and technical knowledge for policy innovations.

Since networks require a collective purpose, one important role of leaders is to motivate and coordinate others for this purpose (O'Toole & Meier, 2000). A key

component of successful leadership is being able to articulate a vision to public employees and the general public. Governors that place a high priority on an issue in their agendas are more likely to take an active role in bringing together other actors to support these goals. Researchers have found that governors' annual state-of-the-state speeches are useful for understanding governor's preferences and predicting the priorities that governors will pursue during their terms (Bernick & Wiggins, 1991; Coffey, 2006; Herzik, 1991; Van Assendelft, 1997). Governors have limited time and resources, and are more likely to be successful in achieving their priorities if they have a narrow agenda (Ferguson, 2003; Rosenthal, 1990). In the development of networks for P-16 councils, it seems reasonable to assume that governors must have a strong interest in improving the state's education system in order to motivate others to improve the linkages between K-12 and higher education.

> *Hypothesis 3: States will be more likely to form P-16 councils if they have "education governors" that place a high priority on education issues on their agendas, as indicated by the percentage of the governors' state-of-the-state speech devoted to education.*

As Meier and O'Toole (2000) note, the role of the leader alone might not have an effect on the outcome of interest in a network structure. Instead the interactions between leadership and the network must be examined to fully understand the role of the leader. In the context of this study, an education governor may not be able to influence the formation of P-16 councils if he or she lacks formal authority, broad-based support, information about state policy innovations, or pressure for electoral success. As a result,

the interaction between education governors and other leadership characteristics will be examined among the remaining hypotheses in this section.

Next, network theory suggests that leaders will be more effective at promoting their priorities if there is a high level of congruence between their interests and those of the other units in the network (Meier & O'Toole, 2000; Salamon, 2002). One of the biggest challenges of managing networks is ensuring that all members of the network are working together toward the public good (Goldsmith & Eggers, 2004). Even if all units within the network do have the same goal, "they may not want it with the same urgency, the same sequence, or the same time" (Salamon, 2002, p. 13). In the management of public services, the influence that the governor has on bureaucracies commonly depends on having the right people in place (Cox, 1991). Bureaucrats should have management skills, experience, and commitment to the administration's policies. Commitment is particularly important because managers in state agencies are professionals with their own experience and perspectives, and they may not agree with the governor on certain issues relating to their office. One important institutional power governors may possess that influences an agency's level of commitment to the administration is the power to appoint key personnel (Beyle, 2004; Cheek, 1990). The role of governors in appointing agency officials in different states ranges from sole responsibility of appointments, to approval of legislative nominations, to no appointment or approval powers in states where agency officials are publicly elected or internally assigned. Within the state education system, the interests of the governor and the other units in the network may be more closely aligned if the governor has the authority to appoint members of the state

board of education and postsecondary governing board (Knott & Payne, 2003; Lowry, 2001; Manna, 2006).

Hypothesis 4A: States will be more likely to form P-16 councils if the governor has greater institutional powers to appoint members of state board of education and the postsecondary governing board.

Hypothesis 4B: The presence of education governors with greater institutional powers of appointment will increase the likelihood of forming a mandatory P-16 council.

In addition to institutional powers such as appointment, governors' personal powers may also influence their ability to effectively promote their priorities. Network theory suggests that the ability of leaders to develop trust is critically importance for framing goals, setting incentives, and negotiating contributions of network members (O'Toole & Meier, 2000). Leaders must develop this trust though consensus building rather than authoritative control. Thad Beyle's (2004) index of the "personal powers" of governors may provide an indication of the governor's ability to generate broad-based support. This index consists of 1) the governor's margin of victory in the last election; 2) the governor's position on the state's political ambition ladder; 3) personal future; and 4) job approval ratings from public opinion polls. First, governors that won their elections by a large margin may have received more votes because many people already support their ideas. As Barrilleaux and Berkman (2003) found, higher gubernatorial winning margins are associated with budgetary spending patterns that most closely reflect the governors' interests. Second, governors progressing steadily up from statewide elected

office to the governorship will be more effective than those who start with the governorship as their first office. More experienced governors have a better understanding of expectations, and also tend to have more relationships established with important allies who will support them (Beyle, 2004). Third, there is evidence to suggest that governors in their first term in office are less successful in having their proposals passed by the state legislature (Ferguson, 2003). Lastly, governor approval ratings serve as a way for the public to express their opinions about state government in between elections. Governors with high approval ratings can overcome a lack of formal powers and are more likely to have greater support from the public and the legislature, which may lead to greater support for their proposals (Rosenthal, 1990). In addition, administrators in state agencies tend to perceive governors with higher approval ratings as having greater relative and absolute influence, as well as more contact with staff (Dometrius, 2002).

Hypothesis 5A: States will be more likely to form P-16 councils if the governor has greater personal powers.

Hypothesis 5B: The presence of education governors with greater personal powers will increase the likelihood of forming a mandatory P-16 council.

Network leaders also need resources, information, and expertise to deal with complex policy arenas, so they often rely on others to develop knowledge to promote their priorities (Arganoff & McGuire, 1998). The type of knowledge sought in policy networks includes both *tacit knowledg*e gained through the wisdom and experience of others that have faced similar problems, and *explicit knowledge* about facts and operating

procedures that may be needed to implement policy innovations (Goldsmith & Eggers, 2004). Information is crucial for problem solving, and the best information comes from trusted sources rather than a formal chain of command. Trust is developed through repeated interactions, as individuals may be more likely to cooperate if there will be more interactions in the future; and may also be developed more easily if individuals share similar professional or ideological backgrounds (Powell, 1990). For governors, information about policy ideas can come from visiting another state or can spread nationally. The professional network of the National Governor's Association (NGA) is one important outlet for spreading new policy ideas nationally (Rosenthal, 1990). At the first annual meeting of the National Governor's Association in 1989, President George Bush talked about the need for greater educational reform at the state and local level. Ever since that time, education has been among the top priorities at the NGA and the organization has played an important role in distributing policy information about P-16 issues. In 2005, the NGA even awarded monetary grants to states meeting certain criteria such as establishing P-16 governance structures and setting ten-year performance goals for college readiness (Rochford, 2007). There is some evidence to suggest that states where elected officials play a leadership role in professional networks like the National Governor's Association are more likely to adopt policy innovations such as e-government (McNeal, Tolbert, Mossberger, & Dotterweich, 2003), so NGA leadership may have a similar effect on the spread of P-16 councils.

Hypothesis 6A: States will be more likely to form P-16 councils if the governor has a leadership role in the professional network of the National Governor's Association.

Hypothesis 6B: The presence of education governors with leadership roles in professional networks will increase the likelihood of forming a mandatory P-16 council.

Governors' decisions for timing the introduction of new initiatives may also be influenced by the electoral cycle. Elected officials, as rational actors, have an incentive to behave differently prior to an election since voters are likely to take their recent performance into consideration when selecting a candidate to support. At the federal level, there is some evidence to suggest that politicians may introduce economic policies that tend to reduce the unemployment rate prior to elections, while providing greater support for policies that reduce the inflation rate after elections (Nordhaus, 1975). Other studies have found that politicians at the state and federal levels are least likely to increase taxes in an election year and most likely to increase taxes in the first year of their term (Mikesell, 1978; Nelson, 2000; Rogoff, 1990).

Although the majority of research on the influence of electoral cycles relates to economic policy, the timing of elections has also been found to affect the adoption of state policy innovations in education. Policymakers may be reluctant to introduce controversial legislation such as school choice in an election year (Mintrom & Vergari, 1998), while initiatives such as state takeovers that generate "political capital" among important constituent groups tend to be more common in an election year or the year immediately following an election (Wong & Shen, 2002). Proposals to form statewide P-16 councils are unlikely to be a direct campaign issue, since these types of organizational structures are unlikely to have much public salience. However, governors

may find that P-16 councils are an efficient and useful for supporting their overall education agendas.

Hypothesis 7A: States will be more likely to form P-16 councils in an election year.

Hypothesis 7B: The presence of education governors during an election year will increase the likelihood of forming a mandatory P-16 council.

Environmental Characteristics

Lastly, network theory suggests that influences from the surrounding environment may either stimulate change or buffer the network against change (O'Toole & Meier, 2000). The third set of hypotheses will examine how characteristics of the surrounding environment may affect a state's decision of whether to form a P-16 council. These influences may alter the behavior of both political and state agency leaders, so they are likely to have a similar effect on the formation of mandatory and voluntary P-16 councils. The business community may be one particularly important source of influence in the external environment for encouraging collaboration between K-12 and higher education systems. Business groups seeking to improve the local workforce have been one of the most powerful new actors in the education policy arena during the past several decades (Herrington & Fowler, 2003). Businesses that depend on highly educated employees to compete in the global economy may be particularly concerned about the lack of accountability among K-12 and higher education for the transition to college, and may place more pressure on state leaders to improve P-16 education.

Hypothesis 8: States with a high percentage of jobs that require a bachelor's degree or higher will be more likely to form a P-16 council.

Concerns about the ability of the workforce to compete in the global market may be particularly relevant during difficult economic times. While the availability of financial resources may encourage states to experiment with more costly educational innovations such as broad-based merit aid programs in higher education (Doyle, 2006), poor fiscal conditions may influence states to adopt education reforms that ensure public resources are being used efficiently (e.g. Fusarelli, 2002; Warren & Kulick, 2007; Wong & Langevin, 2005). Policymakers may be motivated to form P-16 councils in an effort to reduce costly programs such as remedial education (Boswell, 2000; Callan et al., 2006; Maeroff, Callan, & Usdan, 2001). Most states provide little to no additional funding for educational appropriations specifically designated for P-16 councils, and the work of these councils is often supported by grants from the federal government or external sources such as the National Governor's Association or the Pew Charitable Trust Foundation (Bowler, 2001; Rochford, 2007).

Hypothesis 9: States will be more likely to form a P-16 council if the unemployment rate is high.

Next, educational problems, such as low student achievement, may also motivate states to implement new education reform policies. In particular, public dissatisfaction and media coverage can quickly increase the salience of education problems and raise the priority of these issues on the state's policymaking agenda (Kirst, Meister, & Rowley, 1984). Low student achievement scores have been associated with state adoption of K-12

accountability policies (McDermott, 2003) and school choice legislation (Mintrom, 1997; Mintrom & Vergari, 1998). States are also more likely to adopt broad-based merit aid programs in higher education when college continuation rates are low (Doyle, 2006). In the P-16 literature, concerns about low college continuation and completion rates have commonly been cited as catalysts for engaging interest in greater P-16 collaboration (Kettlewell, Kaste, & Jones, 2000; Maeroff, Callan, & Usdan, 2001).

H10: The percentage of states' 19-year olds enrolled in college in the fall following high school graduation (or chance for college by age 19) will be negatively associated with the likelihood of forming a P-16 council.

Lastly, the size of the state's population may affect the state's capacity for trying new policy innovations and the level of demand for new organizational structures. The likelihood of adopting policy innovations, particularly technically complex initiatives, tends to be greater among states with large populations (Berry & Berry, 2007; Hearn, McLendon, & Mokher, 2009; McLendon, Heller, & Young, 2005). These states may have more financial and informational resources available to experiment with new policy ideas. They may also be particularly likely to benefit from a more integrated organizational structure because they tend to have more complex educational systems due to the large number of colleges, districts, and schools needed to serve the population.

H11: The size of the total state population will be positively associated with the likelihood of forming a P-16 council.

CHAPTER IV

RESEARCH METHODS

The purpose of this study is to examine how organizational structures, political leadership, and environmental conditions have influenced the formation of statewide P-16 councils in the American states. Although several case studies have identified factors that have influenced the formation of P-16 councils in *individual* states, this study is the first to provide systematic evidence of the factors that may facilitate or hinder the spread of these organizations nationwide. The methodological technique of event history analysis is used to gain a better understanding of the occurrence and timing of these policy decisions across the American states. The findings from this research will fill a significant gap in the education literature, as there is a lack of empirical research on P-16 education despite the growing importance of this field (Kirst, 2005; McLendon & Heller, 2003).

This chapter will describe the definition of P-16 councils, as well as the other variables and data used in the analysis. The data collection phase in this study represents an important contribution, as many different sources were compiled into a unique data set containing longitudinal indicators for all fifty states. Particular attention will be given to explaining how a quantitative content analysis of governors' state-of-the-state speeches was conducted to identify "education governors" in each state. Lastly, the methodological technique of event history analysis will be explained and the models to be estimated in the analysis will be presented.

Definition of P-16 Councils

Before moving into the details of the analysis, it is important to understand exactly what is meant by the term "P-16 council." Nearly all states have engaged in some type of P-16 activity, but long-term, statewide organizational structures that influence a broad range of policies spanning K-12 and higher education are less common. For the purposes of this analysis, an original set of criteria was developed for identifying meaningful statewide efforts to initiate P-16 councils. All of the following six criteria must be met to fulfill this definition of a statewide P-16 council:

1. *Participation*: Must be statewide rather than regional or local. Members must be geographically dispersed throughout the state.
2. *Levels of education represented*: Must include at least K-12, community college, and four-year university levels. May also include pre-Kindergarten, early childhood programs, workforce development, and graduate education.
3. *Membership:* Must include at least one state agency or statewide governing body representing both the K-12 and higher education sectors in order to facilitate statewide policy changes. In states with small public higher education sectors, this requirement for higher education agency membership may be fulfilled if a leader from each of the state's public higher education institutions is represented.
4. *Duration:* Must be an on-going committee rather than a group assigned to a short-term or one-time task.
5. *Involvement:* Members must meet at least once annually.
6. *Function:* Must have an explicitly stated purpose or evidence that the council is involved in informing, advising, or influencing state policymaking on more than

one P-16 issue (e.g. dual enrollment, alignment of curriculum or assessments, unified data systems, etc.). This may be accomplished by preparing reports or making presentations for state policymakers, providing testimonies in legislative sessions, or establishing meetings between educators and state policymakers.

Using the six criteria outlined above, there are currently thirty-one states that have formed at least one eligible P-16 council (see Table 3). Some of these P-16 councils have been initiated voluntarily by state education agencies, while other councils have been mandated by the state through executive orders of the governor or legislative statute. In eight states (AR, HI, IL, MD, MO, NV, OH, TX) voluntary P-16 councils were later formalized by executive orders or legislative statutes. Appendix A provides a detailed description of all P-16 councils by state.

Table 3

Statewide P-16 Councils by State, Name, Year Established, Type, and Study Criteria

State	Name	Year Established	Type	Participation	Levels of Ed.	Membership	Duration	Involvement	Function
AL	Department of Workforce Development	2007	Executive order						X
AK	None								
AZ	Governor's P-20 Council of Arizona	2005	Executive order	✓	✓	✓	✓	✓	✓
AR	Arkansas Commission for the Coordination of Educational Efforts	2003	Statute	✓	✓	✓	✓	✓	✓
	The Arkansas P-16 Partnership	2001	Voluntary	✓	✓	✓	✓	✓	✓
CA	Superintendent's California P-16 Council	2004	Voluntary	✓	✓	✓	✓	✓	✓
	Intersegmental Coordinating Committee	1987	Voluntary			X			
CO	Governor's P-20 Education Coordinating Council	2007	Executive order	✓	✓	✓	✓	✓	✓
	Colorado Education Alignment Council (CEAC)	2005	Executive order				X		
	Colorado Partnership for Education Renewal (CoPER)	2005	Voluntary			X			
CT	Pk-16 Council	2007	Voluntary				X		
DE	Delaware P-20 Council	2005	Statute	✓	✓	✓	✓	✓	✓
	Delaware P-20 Council	2003	Executive order	✓	✓	✓	✓	✓	✓
FL	Florida Board of Education (reorganized)	2000	Statute	✓	✓	✓	✓	✓	✓
	State Department of Education, Articulation Coordinating Committee	1970s	Voluntary			X			
GA	Alliance of Education Agency Heads	2006	Voluntary	✓	✓	✓	✓	✓	✓
	Education Coordinating Council (ECC)	2000	Statute				X		
	Georgia P-16 Initiative	1995	Executive order	✓	✓	✓	✓	✓	✓
HI	Hawaii P-20 Initiative Council	2007	Statute	✓	✓	✓	✓	✓	✓
	Hawaii P-20 Steering Committee	2002	Voluntary	✓	✓	✓	✓	✓	✓
ID	None								
IL	Illinois P-20 Council	2007	Statute	✓	✓	✓	✓	✓	✓
	Illinois P-16 Collaboration	1999	Voluntary	✓	✓	✓	✓	✓	✓
	Joint Education Committee	1998	Voluntary				X		
IN	Indiana's Education Roundtable	1999	Statute	✓	✓	✓	✓	✓	✓
	Indiana's Education Roundtable	1998	Executive order	✓	✓	✓	✓	✓	✓

Table 3 (Continued)

State	Name	Year Established	Type	Participation	Levels of Ed.	Membership	Duration	Involvement	Function
IA	Iowa Learns Council	2003	Executive order				X		
	Education Roundtable	2001	Executive order				X		
KS	Kansas Transition Council	2005	Voluntary	✓	✓	✓	✓	✓	✓
	Governor's Education Policy Team	2003	Voluntary				X		
KY	Kentucky P-16 Council	1999	Voluntary	✓	✓	✓	✓	✓	✓
LA	Blue Ribbon Commission for Educational Excellence	1999	Voluntary						X
ME	Task Force to Create a Seamless PK Through 16th Grade Ed. System	2004	Executive order				X		
MD	Maryland K-16 Leadership Council	2007	Statute	✓	✓	✓	✓	✓	✓
	Maryland K-16 Partnership for Teaching and Learning	1995	Voluntary	✓	✓	✓	✓	✓	✓
MA	Massachusetts Readiness Project	2007	Executive order			X			
	Massachusetts Advisory Committee on Education Policy	2005	Voluntary				X		
MI	None								
MN	Minnesota P-16 Education Partnership	2002	Voluntary	✓	✓	✓	✓	✓	✓
MS	Mississippi P-16 Council	1995	Voluntary				X		
MO	Missouri P-20 Council	2006	Statute	✓	✓	✓	✓	✓	✓
	Missouri K-16 Task Force	1997	Voluntary	✓	✓	✓	✓	✓	✓
MT	Kindergarten to College Workgroup	2006	Voluntary				X		
	P-20 Committee	2000s	Voluntary						X
NE	Nebraska P-16 Initiative	1998	Voluntary	✓	✓	✓	✓	✓	✓
NV	Nevada P-16 Advisory Council	2007	Statute	✓	✓	✓	✓	✓	✓
	Nevada P-16 Council	2002	Voluntary	✓	✓	✓	✓	✓	✓
NH	New Hampshire P-16 Working Group	2006	Executive order	✓	✓	✓	✓	✓	✓
NJ	None								
NM	None								
NC	North Carolina Education Cabinet	1992	Statute	✓	✓	✓	✓	✓	✓
ND	P-16 Education Task Force	2005	Voluntary				X		

Table 3 (Continued)

State	Name	Year Established	Type	Participation	Levels of Ed.	Membership	Duration	Involvement	Function
OH	The Ohio Partnership for Continued Learning	2005	Statute	✓	✓	✓	✓	✓	✓
	Joint Council	1998	Voluntary	✓	✓	✓	✓	✓	✓
OK	Achieving Classroom Excellence (ACE)	2005	Statute	✓	✓	✓	✓	✓	✓
OR	Unified Education Enterprise (UEE)	2005	Voluntary	✓	✓	✓	✓	✓	✓
	Oregon Pk-20 Redesign	2005	Voluntary			X			
	Office of K-16 Alignment	1993	Executive order			X			
	Joint Boards	1977	Statute			X			X
PA	Pennsylvania State K-16 Council Initiative	2000	Voluntary	X		X			
RI	Statewide PK-16 Council	2005	Executive order	✓	✓	✓	✓	✓	✓
SC	Education and Economic Development Coordinating Council	2005	Statute	✓	✓	✓	✓	✓	✓
SD	None								
TN	Tennessee Pk-16 Education Network	2002	Voluntary					X	
	THEC P-16 Council	2001	Voluntary	✓	✓	✓	✓	✓	✓
	Tennessee Tomorrow, Inc.	1994	Voluntary						X
TX	Texas P-16 Council	2003	Statute	✓	✓	✓	✓	✓	✓
	Public Education/ Higher Education Coordinating Group	1998	Voluntary	✓	✓	✓	✓	✓	✓
UT	K-16 Alliance	2005	Voluntary	✓	✓	✓	✓	✓	✓
VT	Vermont Public Education Partnership	2001	Voluntary				X		
VA	Virginia's P-16 Council	2005	Executive order				X		
WA	Governor's P-20 Council	2007	Executive order	✓	✓	✓	✓	✓	✓
	Advisory Council	2004	Statute	✓	✓	✓	✓	✓	✓
WV	21st Century Jobs Cabinet of West Virginia	2005	Executive order	✓	✓	✓	✓	✓	✓
	P-20 Council of West Virginia	2001	Executive order				X		
WI	Wisconsin Pk-16 Leadership Council	2001	Voluntary	✓	✓	✓	✓	✓	✓
WY	Wyoming P-16 Education Council	2007	Voluntary	✓	✓	✓	✓	✓	✓
	Wyoming Education Planning and Coordination Council	1997	Statute						X

Variables and Data

The analysis for this study is conducted using a longitudinal panel of data from 1992 to 2007 for all states except New York. The state of New York has a unique organizational structure for its education system that can be traced back to a time period that significantly precedes the formation of any other state P-16 council. In 1784, several of the nation's founding fathers created the New York Board of Regents, which has control over the state's K-12 and higher education systems, as well as other education-related organizations such as libraries, museums, and public broadcasting facilities. According to a case study of New York's educational system by Venezia, Kirst, and Usdan (2006, p. 23),

> New York's "single" system is still bifurcated between the levels, and the political nature of education in New York continually reinforces the divisions. The lack of new or innovative PK–16 reforms at the state level could partially be due to the governor's limited role in education in general and fairly nonexistent role with regard to PK–16 issues. In New York it is the regents—and the Assembly—who are responsible for developing a state-level PK–16 agenda. Yet the regents are viewed as a distant and historical entity removed from education policymaking; they are not woven into the executive or legislative branches. Given the decentralized nature of the Assembly and the overall lack of political unity, compounded by disagreements between the governor and the regents, the chances of coherent state-level PK–16 policymaking in New York seem slim.

The state of New York has been excluded from this analysis for several reasons. First, the existing organizational structure was created so long ago that even if it does meet the criteria for P-16 councils used in this analysis, it would not be feasible to collect data from several hundred years ago and the case would be such an extreme outlier that it would distort all of the results in the empirical analysis. Second, if the Board of Regents

is considered as merely a "symbolic" organization that does not meet the criteria for this analysis, its presence may still affect the state's decision to form a new P-16 council.

The *dependent variables* for the analysis are expressed in terms of a hazard rate, which is a latent variable of the underlying risk process for the formation of P-16 councils. The data used to estimate the hazard rate is a dichotomous variable for whether the state initiated a P-16 council in a particular year. A separate model is estimated for: 1) the first P-16 council in each state, regardless of how it was initiated, and 2) the first mandatory P-16 council in each state formed through an executive order or legislative statute.[4] The definition of a P-16 council is based on the six criteria of participation, levels of education, membership, duration, involvement and function, as outlined in the previous section. For voluntary P-16 councils, the exact year of formation is defined as the year in which state agency officials first formally agreed to collaborate, as indicated by a signed statement of intent or the occurrence of the first meeting of the P-16 council. For mandatory P-16 councils, the year of formation is based on the date that an executive order was signed or a statute was enacted to create a P-16 council.

Table 4 provides a list of the initial years of states' formations of P-16 councils by type. The first P-16 council was formed in North Carolina through a legislative statute in 1992. Thus North Carolina represents the first event for both the formation of any P-16 council and the formation of mandatory P-16 councils. By 2007, thirty-one states had established some form of statewide P-16 council and twenty-one of these states had mandatory P-16 councils.

[4] In almost all cases, the first mandatory P-16 council is the only mandatory P-16 council in the state. The only exceptions are Delaware and Indiana, where a P-16 council established by executive order was further formalized through a legislative statute.

Table 4

Initial Year of State Formation of P-16 Councils, by Type

Any P-16 Council (n=31)		Mandatory P-16 Council (n=21)	
North Carolina	1992	North Carolina	1992
Georgia	1995	Georgia	1995
Maryland	1995	Indiana	1998
Missouri	1997	Florida	2000
Indiana	1998	Texas	2003
Texas	1998	Arkansas	2003
Ohio	1998	Delaware	2003
Nebraska	1998	Washington	2004
Illinois	1999	Ohio	2005
Kentucky	1999	Arizona	2005
Florida	2000	Oklahoma	2005
Wisconsin	2001	Rhode Island	2005
Arkansas	2001	South Carolina	2005
Tennessee	2001	West Virginia	2005
Hawaii	2002	Missouri	2006
Nevada	2002	New Hampshire	2006
Minnesota	2002	Maryland	2007
Delaware	2003	Illinois	2007
Washington	2004	Hawaii	2007
California	2004	Nevada	2007
Arizona	2005	Colorado	2007
Oklahoma	2005		
Oregon	2005		
Rhode Island	2005		
South Carolina	2005		
West Virginia	2005		
Kansas	2005		
Utah	2005		
New Hampshire	2006		
Colorado	2007		
Wyoming	2007		

The data for the dependent variables was compiled through extensive research of P-16 activities in each state. Numerous sources were used in order to verify the accuracy of the information from each source and ensure that no P-16 councils had been overlooked. In the event of discrepancies regarding the year that voluntary P-16 councils were established, priority was given to information provided directly by state sources. The year of formation for mandatory P-16 councils was verified by referencing the original executive order or state statute. All of the following sources were used to collect information about the P-16 councils across the fifty states:

- Internet searches of websites from state legislatures, governors' offices, and education agencies in all states. At each website, a Google site search was conducted to identify any information not readily apparent through the site's own navigation tools, as well as archived information that is no longer posted on the most current version of the site. In select cases, email communication was used to request additional information for verification (e.g. copies of executive orders that are not available online). In addition, LexisNexis was used to download copies of some of the older legislative statutes.
- Several reports on P-16 councils in the fifty states provided by the Education Commission of the States (2006; 2007a; 2007b). These reports gathered information on P-16 councils from internet research, legislative research, and survey data.
- A report summarizing a year-long study of P-16 efforts in all fifty states funded by the Timken Company Charitable Trust (Rochford, 2007).

- Case studies of the formation of P-16 councils in various states (Bowler, 2001; Graves, 2001; Kettlewell, Kaste, & Jones, 2000; Kirst & Bracco, 2004; Maeroff, Callan, & Usdan, 2001; Suggs, 2001; Venezia et al., 2005).
- An annotated bibliography of P-16 references and a summary of state-level P-16 activities provided by the Stark Education Partnerships (2005a; 2005b).
- Information collected by Alex Gorbunov as part of a research project under Aims McGuinness and Will Doyle to review the educational governance structures in the fifty states

The *independent variables* for the analysis come from numerous reliable secondary sources such as the National Center for Education Statistics' Common Core of Data (CCD) and Bureau of Labor Statistics. Unless otherwise specified, these independent variables have time-varying values in order to reflect changes in state characteristics from 1992 to 2007. A complete list of variables and sources is provided in Table 5.

Share of K-12 funding from state sources is a time-varying measure calculated as the revenues received by Local Education Agencies (LEAs) from the state divided by total revenues, and multiplied by 100. Higher values indicate more centralized K-12 education systems with greater state control. The data was downloaded from the National Center for Education Statistics' Common Core of Data at: http://nces.ed.gov/ccd/bat/. The most recent year of data available was from 2004-05, so these values were carried forward to later years.

Table 5
Variable Descriptions and Sources

Variable	Description	Source
Dependent Variable:		
P-16 council	1) Dummy variable (yes=1; no=0) indicating whether a state has any P-16 council, and 2) dummy variable for whether the state has a mandatory P-16 council established by executive orders of the governor or state statute.	Various sources. See "Variables and Data" section for additional information
Organizational Structures:		
Share of K-12 funding from state sources	Time-varying measure calculated as revenues received by the LEAs from the state divided by the total revenues and multiplied by 100. Higher values indicate more centralized K-12 education systems with greater state control.	National Center for Education Statistics, Common Core of Data
Consolidated Governing Board	Time-varying dummy variable (yes=1; no=0) indicating whether the state has a consolidated governing board for postsecondary education. Higher values indicate more centralized higher education systems with greater state control.	McGuinness' State Structures Handbook and Education Commission of the States (ECS)
Leadership Influences:		
Percent of the governor's agenda on education	Time-varying measure of the number of the sentences on education in the governor's annual state-of-the-state speech divided by the total number of sentences in the speech, and multiplied by 100.	Author's calculations based on a content analysis of governor's state-of-the-state speeches
Governor's educational appointment powers	Time-varying interval measure of governor's institutional powers of appointment for education. 0=governor appoints no education members, 1=governor appoints members of either the state board of education OR the higher education governing board, 2=governor appoints some members of both boards, 3=governor appoints all members of both boards. Higher values indicate higher institutional powers.	National Association of State Boards of Education, McGuinness' State Structures Handbook, and Education Commission of the States (ECS)

Table 5 (Continued)

Variable	Description	Source
Governor's personal powers	Annual index measure indicating the extent of the governor's personal powers (1=least powerful; 5=most powerful). Includes governor's electoral margin, position on the state's political ambition ladder, personal future and performance ratings.	Thad Beyle, University of North Carolina at Chapel Hill www.unc.edu/ ~beyle/
Governor's leadership in professional networks	Time-varying dummy variable (yes=1; no=0) indicating whether the governor served as a member of the National Governors Association's executive committee.	Data provided directly by the National Governors Association
Gubernatorial election year	Time-varying dummy variable (yes=1; no=0) indicating whether there is a gubernatorial election in the current year.	David Leip's Atlas of U.S. Elections www.uselectionatlas.org
State Environment:		
Percent of state jobs requiring a bachelor's degree or higher	Three-year moving average calculated as the number of jobs requiring a bachelor's degree or higher divided by the total number of jobs in the state, multiplied by 100.	Bureau of Labor Statistics
Unemployment rate	Time-varying measure of the state's annual unemployment rate, non-seasonally adjusted.	Bureau of Labor Statistics
Chance for college by age 19	Biennial measure of the percentage of each state's 19 year olds who will be enrolled in college somewhere in the US in the fall following high school graduation. It is calculated as the high school graduation rate * the percentage of high school graduates continuing on to college.	Postsecondary Education Opportunity www.postsecondary.org
Total population (logged)	Annual measure of the total population (logged)	Census/ Southern Regional Education Board (SREB), yearly totals and decennial census

Consolidated governing board is a time-varying dummy variable (yes=1; no=0) indicating whether the state has a consolidated governing board for postsecondary education. State higher education governing boards are commonly classified as one of the following types: advisory or planning agency, advisory coordinating board, regulatory coordinating board without budget authority, regulatory coordinating board with budget authority, or consolidated governing boards. The presence of consolidated governing boards indicates more centralized higher education systems with greater state control. The data are obtained from McGuinness' State Postsecondary Education Structures Handbook (Education Commission of the States, 2003; McGuinness, 1994; 1997).

Percent of the governor's agenda on education is a time-varying measure of the number of sentences on education in the governor's state-of-the-state speech divided by the total number of sentences in the speech. The process of coding these speeches is described in greater detail in the next section on "Quantitative Content Analysis of Governors' Speeches." Copies of the governors' speeches in each state were obtained from a variety of sources. For 2000 to 2007, most of the speeches for all fifty states were downloaded from the stateline.org website at: http://www.stateline.org/live/ ViewPage.action? siteNodeId=152&languageId=1&contentId=-1. For prior years, governors' speeches in some states were available from Daniel DiLeo's website at: http://www.personal.psu.edu/ faculty/ d/x/dxd22/research.htm. The remaining speeches were downloaded from state governors' websites, collected from archives of state newspapers using LexisNexis, or requested via Interlibrary Loan Service through Vanderbilt University. One resource used extensively to locate prior governors' speeches was the Internet Archive website at www.archive.org. This site allows the researcher to

enter any url and select an archived version of the website from a series of previous dates. In many cases, the url for the state government website (http://www.state.xx.us, where xx is the state abbreviation) could be accessed back to the 1990s and speeches from previous years could be downloaded directly from the former governor's website.

Institutional powers of the governor describes a time-varying, interval measurement of a governor's power to appoint members of the state board of education and the higher education governing board. The variable was created by using the following coding scheme[5]:

- 0=governor appoints no education board members;
- 1=governor appoints some members of the either the state board of education OR the higher education governing board;
- 2=governor appoints some members of both boards; and
- 3=governor appoints all members of both boards.

Higher values indicate greater levels of institutional appointment powers. The data on governor appointments for the state board of education for 1995, 1999, and 2007 was received via personal communication with David Kysilko at the National Association of State Boards of Education. Data on governor appointments to higher education governing boards in 1994, 1997, and 2003 is from McGuinness' State Postsecondary Education Structures Handbook. There were very few states that made changes to the governors' appointment powers during this period. For the few states that did experience changes, the most recent data available was pulled forward unless the source provided more detailed information about when the change occurred.

[5] More detailed information about the exact number of board members appointed by the governor in each year was not available.

Governor's personal power is an annual index measure indicating the extent of the governor's personal powers with 1 representing the least powerful governors and 5 representing the most powerful. The variable is calculated as an average of four different indicators: (1) governor's electoral mandate (1=succeeded to office (not elected), 5=landslide win of eleven or more points); (2) governor's position on the state's ambition ladder (1=first elective office, 5=steady progression from local to state legislature to statewide office); (3) personal futures of the governor (1=late in final term, 5=early in term, can run again); and (4) governor's job performance rating in public opinion polls (1=less than 30% positive job approval ratings, 5=more than 60% positive job approval ratings). Data from 1994, 1998, 2003, 2004, and 2005 are publicly available from Thad Beyle's website at http://www.unc.edu/ ~beyle/. For the remaining years of the analysis, the governor's personal power index was calculated manually by compiling data from several different sources as follows:

- Governor's electoral mandate was derived from data available online at David Leip's Atlas of U.S. Elections (www.uselectionatlas.org).
- Governor's position on the state's political ambition ladder was coded based on governor biographies provided by the National Governor's Association (http://www.nga.org/portal/site/nga/menuitem.216dbea7c618ef3f8a278110501010a0/).
- The personal future of the governor was derived by identifying gubernatorial election years from David Leip's Atlas of U.S. Elections, counting the year of the governor's term from the National Governor's Association biographies,

and adjusting for term limits using data from the *Book of the States* published by biannually by the Council of State Governments.

- Gubernatorial job performance ratings were coded based on data from the U.S. Officials' Job Approval Ratings (JARs) website, which is maintained by Richard Niemi, Thad Beyle, and Lee Sigelman (http://www.unc.edu/~beyle/jars.html).

Governor's leadership in professional networks is a time-varying dummy variable (1=yes; no=0) indicating whether the governor served as a member of the National Governors Association's (NGA) executive committee.[6] This same approach has also been used by McNeal et al. (2003) to test for the effects of professional networks on the diffusion of state policy innovations. Rosters including the names and states of the executive committee members in all years of the analysis were received through personal communication with Tess Moore at the National Governors Association.

Gubernatorial election year is a time-varying dummy variable (yes=1; no=0) indicating whether there was a gubernatorial election in each year. The variable was coded using data on election years available online at David Leip's Atlas of U.S. Elections (www.uselectionatlas.org).

Percent of state jobs requiring a bachelor's degree or higher is calculated as the number of jobs requiring a bachelor's degree or higher divided by the total number of jobs in the state, and multiplied by 100. Data for this measure are not available prior to 1997 or after 2005. As a result, the values for 1997 are pulled back to the earlier years in the analysis, and the values for 2005 are pulled forward for the most recent years. A

[6] Although it would have been preferable to account for whether the governor served as a member of the NGA "Education, Early Childhood and Workforce Committee," this is a relatively new committee that was not created until the summer of 2004.

three-year moving average is used for the other years in which data is available in order to minimize the effect of any one-year changes, since the same level of detailed information is not available for all years. The number of employees in each occupation in the state and the total number of employees in the state workforce are both available from the Bureau of Labor Statistics at: http://www.bls.gov/oes/oes_dl.htm. Occupation codes in this data set are linked to the National Employment Matrix from the Bureau of Labor Statistics, which provides the minimum level of education needed for each occupation[7] (http://www.bls.gov/emp/optd/home.htm). The total employment numbers from all occupations requiring a bachelor's degree or higher are summed together for use in the calculation of the final variable.

The *unemployment rate* is a time-varying measure of the state's annual unemployment rate, not seasonally adjusted. Data are available for download from the Bureau of Labor Statistics at: http://www.bls.gov/data/home.htm.

Chance for college by age 19 is a biennial measure of the percentage of each state's 19 year olds who will be enrolled in college somewhere in the United States in the fall semester following high school graduation. It is calculated as the high school graduation rate multiplied by the percentage of high school graduates continuing on to college. This composite variable may serve as a better indicator of a state's academic performance than either high school graduation rates or college continuation rates alone.

[7] The Bureau of Labor Statistics provides the following information about its education and training classification system: "To assign occupations to these categories, BLS economists acquire a considerable body of knowledge about occupations on the basis of data from both the Bureau itself and other government and private organizations, as well as through interviews with representatives of professional and trade associations, with representatives of unions, and with educators and training experts, among other sources. For some occupations, such as physicians and lawyers, the education and training preparation is straightforward, because it is established by government laws and regulations. For other occupations, such as computer programmers or industrial machinery repairers, jobs may vary considerably in their educational and training requirements. When an occupation has more than one path of entry, BLS identifies the one that research suggests is most preferred by employers."

As Tom Mortenson (2006) notes, "we use this formulation because some states do a poor job of graduating students from high school but send most of those who do graduate on to college. A few states do a better job of graduating their students from high school than they do enrolling them in higher education. These states half-measures are exposed in our analysis where high school graduation and college continuation rates are both required for success" (p. 3). The variable is available for download at www.postsecondary.org based on data from the National Center for Education Statistics.

Total population is an annual measure of the state's total population, logged. The variable is based on data from the U.S. Census' yearly totals and decennial census, and is publicly available for download at the SREB data library (http://www.sreb.org/DataLibrary/datalibindex.asp).

Quantitative Content Analysis of Governors' Speeches

A quantitative content analysis of governors' state-of-the-state speeches was conducted to identify "education governors" in each of the fifty states. It is important to note that this is not a mixed methods study; rather content analysis was simply used as a technique to gather quantitative data on the extent of the governor's agenda devoted specifically to education issues within a state. Even though the term "education governor" has frequently been used in the field of education (e.g. Fusarelli, 2002; Gittell & Kleiman, 2000; Moe, 2003), only anecdotal evidence has been used to identify these types of leaders. While roll call voting information is available to understand the preferences of legislators, there has traditionally been a lack of data for understanding governors' values, opinions, and ideologies (Coffey, 2005). Fording, Woods, and Prince

(2002) note several limitations to previously used methods of measuring governors' priorities and influence. First, budgetary analysis is difficult to use to identify policy innovations because most state budgets consist of incremental changes from previous years. Even if additional funding is allocated to support a particular program area, innovations in the content of the programs cannot usually be identified. Second, studies of legislative overrides of governor vetoes have difficulty discerning which policies were originally initiated by the governor. In addition, there tend to be high levels of multicollinearity between override vetoes and other factors such as the presence of divided government partisanship. Third, broad indicators such as gubernatorial powers or leadership assume that all governors or members of a certain political party want the same thing, while the priorities of individual governors are unclear.

Content analysis of governors' state-of-the-state speeches is an alternative approach for understating the priorities of governors and their influence in the policy process. These speeches "best approximate the governor's actual policy agenda" (Herzik, 1991, p. 30) and have been used in the field of political science to understand the role of the governor in promoting important policy initiatives and state priorities (Coffey, 2005, 2006; DiLeo, 1997, 2001; DiLeo & Lech, 1998; Ferguson, 2003; Fording, Woods, & Prince, 2002; Van Assendelft, 1997). The ability of governors to use speeches to gain publicity and media attention is an important informal power. The governor's agenda is expressed to the public and state legislators in the state-of-the-state speech, which provides details about his or her priorities for both policymaking and budget allocations. In most states, the governor delivers the state-of-the-state speech every year at the beginning of the legislative session, which "serves as the springboard for the chief

executive to enter the legislative policymaking process" (Bernick & Wiggins, 1991, p. 76). Although these speeches usually provide an overview of a variety of state policy areas, governors tend to prioritize the several areas most important to them by placing the most emphasis on these issues (Rosenthal, 1990; Van Assendelft, 1997).

Previous studies that have conducted quantitative content analyses of governors' state-of-the-state speeches have counted the number of times certain policy issues appear (Coffey, 2006; DiLeo & Lech, 1998; Ferguson, 2003; Fording, Woods, & Prince, 2002; Van Assendelft, 1997), as well as the number of times a specific ideological position (e.g. liberal v. conservative or redistributive v. non-redistributive) is implied in each speech (Coffey, 2005; DiLeo, 1997). In this study, governors' speeches are used to examine whether the presence of "education governors," identified as those who intend to devote a high percent of their agendas to educational issues, is important for understanding the formation of P-16 councils. Using the same approach as Coffey (2006), the variable for the analysis is calculated as:

$$\text{\% of governor's agenda on education} = \frac{\text{\# sentences on education}}{\text{total \# of sentences in the speech}}. \qquad (1)$$

As Coffey (2006) observed, nearly all previous studies that conducted a content analysis of governor's state-of-the-state speeches created *a priori* categorizations for coding the speech content. For this analysis, the number of sentences on education is broadly defined as any content that relates to either K-12 or higher education as the primary policy area. An initial categorization of education terms was created from a list of K-12 education words on the agenda coding key used by Daniel DiLeo, which is publicly available at: http://www.personal.psu.edu/faculty/d/x/ dxd22/items.htm. Next, numerous studies on P-16 education that have been cited in this study were browsed to

identify other important keywords relating to both K-12 and higher education. A list of the terms used to initially identify sentences on education is provided in Appendix B.

Nearly all of the governors' speeches during the time frame of this analysis could be downloaded or copied and pasted into Microsoft Word. The total number of sentences in each speech was computed by Word's "readability statistics" function. A software program called Firefly Document Analysis Tool 3.0.1 was used to assist in the coding of education related sentences. This program allows the researcher to enter a list of custom words, and then all occurrences of these words in the text are automatically flagged. For all speeches, each of these flagged words was reviewed manually to identify sentences in which the governor discusses education as the primary policy area. In addition, the context of the preceding and following sentences was checked to identify other sentences related to education that might have been overlooked. The total number of sentences relating to education was counted manually. If only a hard copy of a speech was available, the entire coding and counting process was done manually.

Most of these sentences identified through the coding process describe the condition of the state's education system, funding proposals for education, and/or new education policy proposals. Yet they may also include general statements about education that do not imply any action on the part of the governor. For example, Governor Lingle's 2004 state-of-the-state speech for Hawaii states, "Quality *education* is the most valuable gift one generation can give to the next." This sentence is still coded as education-related even though it does not specifically address the governor's plans because it shows that the governor values education. Governors have a limited amount of time for their speeches and any content discussing education comes at the expense of another policy

area. Thus, these types of sentences still provide an indication of the governor's priorities. Sentences in which education is listed as one of several different types of policy initiatives are not coded because they do not specifically relate to education as the primary content area. For example, the order of the governor's priorities are unclear in the sentence: "If we keep in mind just a few simple goals: better *schools*, affordable health care, safe communities, good jobs, and the value of family -- we can help people build better lives" (Governor Blagojevich of Illinois, 2005). In addition, sentences are not coded if the context does not relate specifically to K-12 or higher education. One example of this would be the sentence: "that's why we're going to *educate* Medicaid recipients about preventive care" (Governor Fletcher of Kentucky, 2004). In this sentence, the word *educate* is used to refer to health care, rather than education, so the sentence is not counted.

Due to the time consuming nature of content analysis and the difficulty of locating speeches for every year of the analysis, governors' state-of-the-state speeches were only coded for the first and third years of each governor's term. These values were pulled forward to the second and fourth years of the same governor's term, respectively. Using this coding pattern there were a total of 403 speeches that needed to be coded between 1992 and 2007.[8] The first year was selected for coding because it represents the

[8] Most states held gubernatorial elections in 1990, and a new governor came into office in 1991. Since 1991 represents the first year in office, the state-of-the-state speeches from this year were coded and applied to governors' second year of the term in 1992. There were a total of 9 years that usually needed to be coded (1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, and 2007) for 49 states, resulting in a total of approximately 441 speeches. There were a few additional speeches that were coded in cases where a governor did not serve a full term and a new governor came into office. With the use of event history analysis, once a state forms a P-16 council, it is no longer at-risk of experiencing the event and the observation is omitted from future years of the analysis (more detailed information is provided in the next section on this topic). As a result, governors' speeches no longer needed to be coded for the analysis after a state forms a mandatory P-16 council. These omitted cases reduced the number of speeches that needed to be coded from 441 to 403.

time when the governor initially sets the agenda for his or her term in office. The third year was selected because it signifies the mid-point of the governor's current term. By this time, some of the governor's early initiatives may have already been achieved, and several new policy ideas may be introduced. Few changes in the governor's policy agenda may be expected in the fourth year of the term. Governors that are unable to seek another term in office may become "lame ducks" with little political power to initiate new proposals (Ferguson, 2003). Or governors preparing for re-election may focus on highlighting the achievements of their current term while saving new ideas for their next political campaign. Thus the first and third years may most accurately reflect the priorities of the governor's agenda throughout the term. In some states (e.g. Arkansas, Montana, Nevada, North Carolina, and Texas) the governor only gives state-of-the-state speeches during the first and third years of the term, so this coding method also ensures that the timing of the speeches is as consistent as possible across all states.[9]

Although governors' agendas may also be modified over time in response to changes in state conditions such as the economy, there is evidence to suggest that gubernatorial interest in education tends to remain fairly constant. Herzik (1983, 1991) coded governor's state-of-the-state speeches from 1970 to 1988 and identified three types of issues on governors' policy agendas: 1) perennial issues that every government must deal with in providing traditional state services; 2) cyclical issues where interests grow, peak, and decline; and 3) transitory issues that are short-lived and can be emotionally charged or polarized. He found that education was the most common perennial issue, and

[9] For approximately 13% of the cases, the governor did not give a speech in the first or third year, or the corresponding speeches could not be located. In these situations, speeches from the second or fourth year of the same governor's term have been substituted. For example, if only an inaugural speech was given in the first year of the governor's term, the state-of-the-state speech from the second year of the term was coded.

interest in this policy area did not fluctuate much even amid political trends, changes in public interest, or external events. DiLeo and Lech (1998) reexamined Herzik's typology of issues using more recent data from 1990 to 1998. These authors also found education to be a perennial issue, and there was less variation over time in the percentage of governors presenting education issues in agenda-setting speeches than any other issue. Based on the findings from these studies, it seems reasonable to assume that governors' attention to education issues should not change too much during a two-year time period, as coded in this analysis.

The validity of the coding was checked by examining the percent of the state-of-the-state speeches on education for several governors that have previously been identified in the literature as "education governors" by other researchers (e.g. Berdahl, 2004; Fusarelli, 2002; Gittell & McKenna, 1999; McLendon, 2003; Moe, 2003). There is evidence that each of these governors have supported a variety of different educational issues including vouchers, educational governance reform, postsecondary scholarship programs, education budgets, and teacher quality. As indicated in Table 6, most of these governors spent one quarter to one-third of their state-of-the-state speeches discussing education;[10] which implies that education was within one of the top three to four issues on the governor's agenda. In addition, all of these governors except Jim Edgar greatly exceeded the national average of 16% of the state-of-the-state speech on education. These findings suggest that the variable created for this analysis does appear to serve as a valid indicator for identifying the presence of "education governors."

[10] In this table, the average percent of the state-of-the-state speech on education is calculated as the mean value for all years that were coded while each governor was in office.

Table 6
Average Percent of the State-of-the-State Speech on Education for Governors Previously Identified as "Education Governors"

Governor's Name	State	Years in Office	Types of Education Initiatives Supported	Average % of state-of-the-state speech on education
Zell Miller	GA	1991-1999	Scholarship program, charter schools, education budget, teacher pay, preschool	33.4%
Jeb Bush	FL	1999-2007	Vouchers, teacher quality, initiatives for failing schools	30.0%
Paris Glendenning	MD	1995-2003	Education budget, scholarship program, state takeovers, technology in schools	27.7%
Tommy Thompson	WI	1987-2001	Vouchers, local control of schools, accountability, school-to-work programs	25.5%
Jim Edgar	IL	1991-1999	Postsecondary governance reform, charter schools, school finance equity	14.5%

The inter-rater reliability of the coding in this analysis was verified against the previous work of Daniel Coffey (2006). Coffey conducted a content analysis of governors' state-of-the-state speeches from 2001-2005 and coded sentences into one of fourteen different policy areas including education. During these years, there were a total of 118 speeches that were coded in both this analysis and the Coffey analysis. The Pearson correlation coefficient between the percentages of the governors' speeches related to education in the two analyses was 0.97, indicating a very high level of inter-rater reliability.

Event History Analysis

The primary analysis for this study is conducted using *event history analysis* (EHA) to examine which factors influence whether a state forms a P-16 council, as well

as how these councils have spread across the American states over time. This analytic technique originated in the biomedical sciences, but was introduced into studies of comparative state politics with Berry and Berry's (1990) analysis of state adoption of lottery programs. The authors found the technique to be particularly well-suited to studies of state policy adoption because it can be applied in cases where there is very little variation in the dependent variable (Berry & Berry, 2007). Over the past two decades, event history analysis has become accepted in the social sciences as the most appropriate method for examining patterns of change over time, and has become the standard technique for studying the timing of state policy innovations (Box-Steffensmeier & Jones, 1997; Buckley & Westerland, 2004; Jones & Branton, 2006).

Event history analysis provides several advantages over traditional logistic regression techniques (Bennett, 1999; Box-Steffensmeier & Jones, 2004). First, while logistic regression can only be used to predict whether an event occurred, EHA allows for an examination of both the occurrence and timing of events. In studies of state policy adoption, researchers are commonly interested in *when* an event occurred relative to other states. Next, logistic regression commonly omits any cases that did not experience the event at the end of observation period, resulting in sample bias. In event history analysis, a state that has not yet adopted a policy by the end of the observation period is known as a censored observation. EHA is able to use information from both censored and uncensored observations to generate unbiased parameter estimates.

The *event* of interest in this analysis is the formation of statewide P-16 councils. Any state that has not formed a P-16 council at a given time period is *at-risk* of experiencing the event. The *date of origin* is the time when the observations first became

at-risk. The year that the first state adopted a policy is commonly used as the date of origin in studies of state policy innovation. In this analysis, the date of origin will be 1992 when North Carolina formed the first statewide P-16 council. The *event time* is the length of time from the date of origin until a state forms a P-16 council. Time is measured in discrete units as the number of years since 1992 (*t*) until a state (*i)* forms a P-16 council.[11] Any state that has not formed a P-16 council by the end of the observation period in 2007 is classified as a *right-censored* observation. It is unknown whether these states will decide to form a P-16 council later in the future, or if they will never form a P-16 council. Since many of the same factors that lead to censoring are related to event occurrences, the model accounts for both censored and uncensored observations.

The basic structure of the data is an observation-period dataset with one record per state for each year. Time-varying covariates are assigned to the corresponding values for each observation at each point in time. A value of zero is assigned to the dependent variable for every year in which the event has not yet occurred. The value of the dependent variable changes to one in the year in which an event does occur. After this time, an observation is no longer at-risk for experiencing the event so the observation is coded as missing and removed from the data set.

Two important distributional functions within event history analysis are the survival function and the hazard function. The survival function is the probability that a unit will "survive" (or fail to experience the event) longer than time *t* (Box-Steffensmeier & Jones, 2004). The survival function can be thought of as the proportion of states that have not formed a P-16 council beyond a specified time period. In this analysis, graphs of

[11] In studies of state policy innovation it is common to measure time discretely in years since the emphasis is on when an event occurred relative to other states, rather than the exact date of policy adoption (Box-Steffensmeier & Jones, 1997).

the Kaplan-Meier survival function will be provided to illustrate the rate of change of these probabilities over time. The primary dependent variable of interest is the hazard rate, which is a latent variable of the underlying risk process for an event occurrence. The hazard function represents the instantaneous rate of change in the probability of experiencing an event at time *t*, conditional upon "survival" (or failure to experience an event) up to the specified period of time (Box-Steffensmeier & Jones, 2004). For this analysis, the hazard function indicates the likelihood that a state without a P-16 council would form one in a particular year. The multivariate model assesses how specific explanatory variables affect the hazard rate.

Since the probability that a state will form a P-16 council may change over time as these organizations become more popular, the risk of experiencing the event must be allowed to vary in different time periods. Early EHA studies of state policy innovation commonly utilized discrete time logit models which include a parameter for the time dependence, known as the baseline hazard function (e.g. Berry & Berry, 1990; Mintrom, 1997; Mooney & Lee, 1995). In these types of models, the baseline hazard function is usually specified using a series of dummy variables for each time point or a transformation such as the log of time. More advanced studies have utilized lowess or spline functions to more accurately characterize the time dependency (Beck, Katz, & Tucker, 1998; Buckley & Westerland, 2004). Yet one of the problems of discrete time logit models is that the hazard function may be estimated inaccurately if the wrong parameter is specified for time.

The particular specification for this analysis is the Cox proportional hazards model. The Cox model can account for changes over time without specifying the

functional form of the duration dependence, allowing the researcher to focus on the relationship between the outcome and the covariates of theoretical interest (Box-Steffensmeier & Jones, 2004; Hosmer & Lemeshow, 1999). Any state that has not yet formed a P-16 council in a given year is included in the *risk set* of observations that are eligible to experience an event in that year. The Cox model uses information about the order of the events to estimate the conditional probability that a state will form a P-16 council in each time period, given the number of states at-risk and the values of those states on important covariates. Maximum partial likelihood estimation is used to calculate the parameter estimates by using information about these ordered event times to predict the likelihood of observing the outcomes that have occurred. This method provides an estimate of how the hazard rate changes as a function of the covariates, without making any assumptions about the underlying nature or shape of the baseline hazard rate. The basic specification of the Cox proportional hazards model is:

$$h_i(t) = h_0(t)\exp(\beta'\boldsymbol{x}), \tag{2}$$

where $h_i(t)$ is the proportional hazard of experiencing an event for the individual unit *i* at time *t*, and $\beta'\boldsymbol{x}$ is the matrix of covariates (Box-Steffensmeier & Jones, 2004). The baseline hazard function of the duration dependence, h_0, is assumed to be constant across all observations and is not directly estimated in the model. The Cox model is often referred to as a semi-parametric model because even though parameters are estimated for the relationship between the covariates and the hazard rate, the distributional form of the baseline hazard function is given no parameterization. The proportional hazards assumption of the Cox model indicates that the baseline hazard rate is assumed to be common to all observations. There is also no reference to time so that the difference

between the log hazard for one group and another is always constant. The coefficients for the covariates in the Cox model scale the baseline hazard function, which means that the ratio of the hazard functions for different values of each covariate are in a fixed proportion across time.

For this analysis, the model estimated for the formation of statewide P-16 councils is:

$$\begin{aligned} h_i(t) = \exp[&\beta_1(\text{ShareK12}) + \beta_2(\text{CGB}) + \beta_3(\text{Edgov}) \\ &+\beta_4(\text{Appoint}) + \beta_5(\text{PPower}) + \beta_6(\text{NGALead}) \\ &+\beta_7(\text{Electyr}) + \beta_8(\text{BAplus}) + \beta_9(\text{Unemp}) \\ &+\beta_{10}(\text{Chance19}) + \beta_{11}(\text{Ltotpop}) + \beta_{12}(\text{EdGovXAppoint}), \\ &+\beta_{13}(\text{EdGovXPPower}) + \beta_{14}(\text{EdGovXNetwork}) \\ &+\beta_{15}(\text{EdGovXElectyr})] \end{aligned} \tag{3}$$

where $h_i(t)$ is the proportional hazard of forming a statewide P-16 council for state *i* in year *t*, and β_{1-15} is the vector of covariates. These covariates test the hypotheses posed in the previous chapter and are defined as follows:

ShareK12=Share of K-12 funding from state sources

CGB=Presence of a consolidated governing board for postsecondary education

Edgov=Percent of the governor's agenda on education

Appoint=Governor's educational appointment powers

PPower=Governor's personal powers

NGALead=Governor's leadership in professional networks

Electyr=Gubernatorial election year

BAplus=Percent of state jobs requiring a bachelor's degree or higher

Unemp=Unemployment rate

Chance19=Chance for college by age 19

Ltotpop=Total population, logged.

β_{12-15} represent the interaction terms between the "education governor" variable and the other leadership characteristics in the model. These interaction terms are used to test whether education governors have an even greater influence if they possess formal authority, broad-based support, network information about state policy innovations, and electoral pressures (see hypotheses 4B, 5B, 6B, and 7B). A Wald test will be conducted to determine if each of these interaction terms significantly improves the overall fit of the model. Due to limitations with degrees of freedom, only statistically significantly interaction terms will be included in the final model.

All of the coefficients are exponentiated so that they are expressed in the form of hazard ratios, which makes it easier to interpret them substantively. Hazard ratios greater than one indicates that the risk of forming a statewide P-16 council increases at higher values of the covariate; thus indicating that a state is more likely to form a P-16 council. The interpretation for a hazard ratio of less than one is that the risk of forming a statewide P-16 council decreases as the values of the covariate increase, indicating a longer time to event.

A *tied event* occurs if more than one observation experiences the event in the same time period. Since maximum partial likelihood estimation uses information about the rank ordering of event times, tied events make it difficult to determine which states should be included in the risk set because the sequence of these events is undetermined. In early EHA studies, this issue was so problematic that the Cox model was considered to be inappropriate if more than 5% of the observations experienced the event at the same time (Yamaguchi, 1991). However, this problem has been resolved due to recent

methodological advances in approximating the sequence of tied events (Jones & Branton, 2006). In this analysis, the exact discrete method is used to construct the partial likelihood estimates when tied events occur. This method assumes that the events happened simultaneously by calculating the probability of the event occurrences in each period using all possible combinations of events and non-events. When estimating the partial likelihood using the exact discrete method, the total number of events (η_{1k}) in the *k*th risk period is defined as:

$$\eta_{1k} = \sum_{i=1}^{J} y_{ki} \ , \tag{4}$$

where there are i=1,2,…J_k observations at risk. The total number of non-events in the risk set is:

$$\eta_{0k} = J_k - \eta_{1k}. \tag{5}$$

The probability of the response pattern $\mathbf{y_k}$ is estimated as follows:

$$\Pr(\boldsymbol{y_k} \mid \sum_{i=1}^{J} y_k = \eta_{1k}) = \frac{\exp(\beta' \Sigma_{i=1}^{J} \boldsymbol{x_{ki}} \boldsymbol{y_{ki}})}{\Sigma_{d_k \in R_k} \exp(\beta' \Sigma_{i=1}^{J} \boldsymbol{x_{ki}} d_{ki})}, \tag{6}$$

where R_k is the total of all possible combinations of events and non-events in the *k*th risk period, $\boldsymbol{d_k} = (d_{k1,} d_{k2,} ..., d_{kj}),\ d_{ki} = 0$ or 1 (Box-Steffensmeier & Jones, 2004).

CHAPTER V

FINDINGS

This chapter will begin by providing descriptive statistics and correlation coefficients among each of the independent variables in the analysis. The basic quantities of the survival and hazard functions will be discussed, along with a description of the spread of statewide P-16 councils over time. Next, the empirical results from the multivariate event history analysis will be presented separately for each of the dependent variables: 1) the formation of *any* statewide P-16 council, which consists primarily of councils initiated by voluntary collaborations among state agencies, and 2) the formation of *mandatory* statewide P-16 councils created by executive orders of the governor or legislative statutes. The analysis is conducted sequentially by adding blocks of variables representing each of the three sets of hypotheses (organizational structures, leadership influences, and environmental characteristics) separately before estimating the fully specified model. After presenting the overall results of the models, diagnostic tests will be run, followed by an interpretation of the magnitude of the effects and the predicted survival functions by different values of important covariates. The chapter closes with a discussion of the findings in relation to the original hypotheses that were proposed in Chapter 3.

Descriptive Statistics

There was very little change in the average values for most of the independent variables over the sixteen-year timeframe of this analysis (see Table 7). The average share of K-12 funding from state sources remained just under 50% in 1992 and 2007. However, there was considerable variation across states with revenues from state sources comprising 87% of K-12 funding in Hawaii and only 27% in Nevada during 2007. Among the higher education governance structures, forty-five percent of states had consolidated governing boards in 1992. Florida, Massachusetts, and West Virginia had consolidated governing boards during this time, but changed to another form of postsecondary governance by 2007. There were no states that switched from a less centralized form of governance structure to a consolidated governing board during this time.

Table 7
Descriptive Statistics for Variables in Analysis, 1992 and 2007 (N=49 states)

	1992		2007	
Variable	Mean	Standard deviation	Mean	Standard deviation
Share of K-12 funding from state sources	48.04	14.56	49.25	12.77
Consolidated governing board	0.45	0.50	0.39	0.49
Percent of the governor's agenda on education*	11.10	7.98	16.32	10.90
Governor's educational appointment powers	2.47	1.32	2.55	1.29
Governor's personal powers	3.57	0.68	3.78	0.59
Governor's leadership in professional networks	0.18	0.39	0.18	0.39
Gubernatorial election year	0.24	0.43	0.06	0.24
Percent of state jobs requiring a BA or higher	17.32	2.52	18.58	2.54
Unemployment rate	6.78	1.60	4.41	1.05
Chance for college by age 19	40.03	7.51	39.99	7.24
Total population (logged)	14.92	0.99	15.08	1.01

* For 2007, the descriptive statistics for the percent of the governor's agenda on education are only for the 33 states that had not formed a mandatory P-16 council prior to 2007

In 1992, governors spent an average of 11% of their state-of-the-state speeches addressing issues related to education, although there was tremendous variation across states. Among the speeches that were coded, there were ten cases from 1992 to 2007 where the governor did not spend a single sentence discussing education. Yet Governors Gray Davis of California, Parris Glendening of Maryland, Donald Sundquist of Tennessee and Phil Bredesen of Tennessee each devoted over half of their state-of-the-state speeches to education during at least one year of their terms. Many states also experienced dramatic changes in the percent of the governor's agenda on education over time as newly elected officials were sworn into office.

The variable for governor's educational appointment powers had a mean of approximately 2.5 (out of a scale of 3.0) and a standard deviation of 1.3 for all years of the analysis, indicating considerable variation across states in the number of members of the state board of education and the higher education governing board appointed by the governor. During this time, Florida, Kentucky, North Dakota, Ohio, and Pennsylvania increased the governor's educational appointment powers in their states; while Minnesota, New Mexico, Vermont, and Wyoming decreased these powers. There were also many changes in the personal powers of the governors within some states over time. For example, in Alabama Governor Harold Hunt had a relatively low personal power rating of 2.75 in 1992, while Governor Bob Riley received a much higher personal power rating of 4.25 in 2007. Higher values for personal power ratings tend to indicate greater broad-based support for the governor.

For all years of the analysis, governors from nine states served as members of the executive committee of the National Governor's Association. There were 14 states that

did not have a governor on the NGA committee during any year from 1992 to 2007. Wisconsin and Utah were the most commonly represented states at the NGA with governors serving as executive members for thirteen years and ten years, respectively. Most states operated on 4-year gubernatorial election cycles, with 1994, 1998, 2002, and 2006 as the most common pattern of election years during this time.

All of the variables describing the state environment remained relatively constant from 1992 to 2007. The percentage of jobs requiring a bachelor's degree or higher was 17.3% in 1992 and 18.6% in 2007. In 2007, these values ranged from a low of 12.4% of jobs in Nevada to a high of 25.2% of jobs in Massachusetts. The average unemployment rate decreased slightly from 6.8% in 1992 to 4.4% in 2007. Chance for college by age 19 remained at a mean value of approximately 40% for all years of the analysis. In addition, the average state population only increased by 1.1% from 1992 to 2007.

Table 8 shows the intercorrelations of the independent variables in this analysis. A high correlation between any independent variables is an indication of multicollinearity, which may result in inflated standard errors if both variables are included in a multivariate analysis (Wooldridge, 2002). In this analysis, multicollinearity does not appear to be a concern, as the intercorrelations among the variables tend to be relatively low. The values for all of the correlation coefficients between the independent variables are within ±0.50, and most are less than ±0.20.

Table 8

Intercorrelations of Variables in the Analysis (N=49 states)

	ShareK12	CGB	Edgov	Appoint	PPower	NGALead	Electyr	Baplus	Unemp	Chance19	Ltotpop
ShareK12	1.00										
CGB	0.10	1.00									
Edgov	0.05	-0.11	1.00								
Appoint	-0.22	0.04	-0.15	1.00							
PPower	0.05	-0.06	0.03	-0.07	1.00						
NGALead	0.00	0.04	0.12	-0.08	0.22	1.00					
Electyr	0.00	-0.02	0.01	-0.01	-0.16	-0.08	1.00				
Baplus	-0.11	-0.33	-0.03	0.10	-0.13	-0.09	0.01	1.00			
Unemp	0.10	-0.01	-0.15	-0.11	-0.20	-0.07	-0.02	0.04	1.00		
Chance19	-0.26	-0.02	-0.10	0.19	0.03	0.04	0.00	0.11	-0.32	1.00	
Ltotpop	-0.13	-0.43	0.19	-0.18	0.00	0.02	-0.03	0.23	0.20	-0.15	1.00

ShareK12=Share of K-12 funding from state sources
CGB=Consolidated governing board
Edgov=Percent of the governor's agenda on education
Appoint=Governor's educational appointment powers
PPower=Governor's personal powers
NGALead=Governor's leadership in professional networks
Electyr=Gubernatorial election year
BAplus=Percent of state jobs requiring a BA or higher
Unemp=Unemployment rate
Chance19=Chance for college by age 19
Ltotpop=Total population, logged

Survival and Hazard Functions

Figure 1 illustrates the spread of statewide P-16 councils across the American states for select years of the analysis. States shaded in light gray indicate the presence of a voluntary P-16 council initiated by state agencies, while states shaded in black represent P-16 councils mandated by the state government. The shading changes from gray to black for states with voluntary P-16 councils that were later formalized through executive orders of the governor or legislative statutes (AR, HI, IL, NV, OH, and TX). The earliest states to adopt both types of P-16 councils were primarily located in the Eastern and Southern United States. These councils did not begin to spread to Western states until the mid-2000s. The maps also indicate that early adopters were more likely to form voluntary P-16 councils than mandatory P-16 councils. The greatest increase in mandatory P-16 councils occurred during the last three years of analysis when the number of adopters nearly tripled from eight states to twenty-one states.

A list of the states forming P-16 councils in each year is provided in Table 9 for both of the dependent variables. For the event of forming "any" type of P-16 council, at least one new state experienced the event in each year of the analysis except for 1993, 1994, and 1996. The spread of mandatory P-16 councils was more sporadic, with no states experiencing the event in 1993, 1994, 1996, 1997, 1999, 2001, and 2002. The risk set indicates the number of states that continue to operate under separate K-12 and higher education systems, thus remaining "at-risk" for forming a P-16 council at the beginning of a particular year.

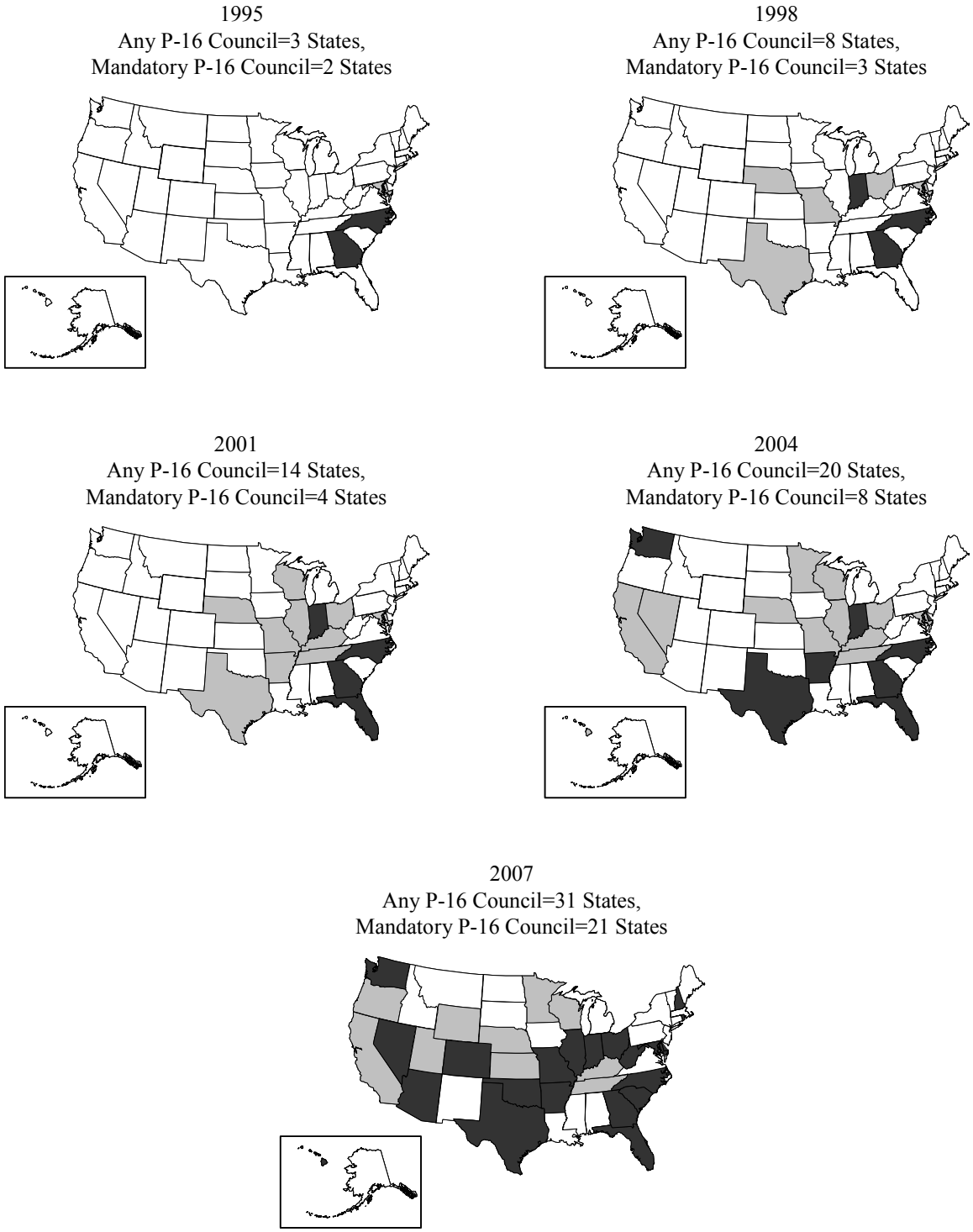

Figure 1. State formation of P-16 councils, selected years from 1995 to 2007. (Voluntary P-16 councils in gray, mandatory P-16 councils in black.)

Table 9

States Forming Any Type of P-16 Council with Survival and Hazard Functions by Year

Year	States Adopting Policies	Number of Adoptions	Cumulative Adoptions	Risk Set	Survival Function	Hazard Function
1992	NC	1	1	49	0.9796	0.002
1993	-	0	1	48	0.9796	0.000
1994	-	0	1	48	0.9796	0.000
1995	GA, MD	2	3	48	0.9388	0.005
1996	-	0	3	46	0.9388	0.000
1997	MO	1	4	46	0.9184	0.003
1998	IN, NE, OH, TX	4	8	45	0.8367	0.013
1999	IL, KY	2	10	41	0.7959	0.008
2000	FL	1	12	39	0.7755	0.004
2001	AR, TN, WI	3	13	38	0.7143	0.016
2002	HI, MN, NV	3	16	35	0.6531	0.020
2003	DE	1	17	32	0.6327	0.009
2004	CA, WA	2	19	31	0.5918	0.023
2005	AZ, KS, OK, OR, RI, SC, UT, WV	8	27	29	0.4286	0.144
2006	NH	1	28	21	0.4082	0.033
2007	CO, WY	2	30	20	0.3673	0.200

States Forming a Mandatory P-16 Council with Survival and Hazard Functions by Year

Year	States Adopting Policies	Number of Adoptions	Cumulative Adoptions	Risk Set	Survival Function	Hazard Function
1992	NC	1	1	49	0.9796	0.002
1993	-	0	1	48	0.9796	0.000
1994	-	0	1	48	0.9796	0.000
1995	GA	1	2	48	0.9592	0.002
1996	-	0	2	47	0.9592	0.000
1997	-	0	2	47	0.9592	0.000
1998	IN	1	3	47	0.9388	0.003
1999	-	0	3	46	0.9388	0.000
2000	FL	1	4	46	0.9184	0.003
2001	-	0	4	45	0.9184	0.000
2002	-	0	4	45	0.9184	0.000
2003	AR, DE, TX	3	7	45	0.8571	0.017
2004	WA	1	8	42	0.8367	0.008
2005	AZ, OH, OK, RI, SC, WV	6	14	41	0.7143	0.068
2006	MO, NH	2	16	35	0.6735	0.040
2007	CO, HI, IL, MD, NV	5	21	33	0.5714	0.303

Table 9 also provides the survival and hazard functions for each year of the analysis. The hazard function estimates the instantaneous rate of change in the probability of forming a P-16 council in a specific year for states that have not yet formed a P-16 council. Prior to 2005, the hazard rate for state formation of any type of P-16 council was less than 3% in each year. This indicates that there is no single year during this time span in which there was a sudden change in the likelihood of forming a P-16 council. However, in 2005 the hazard function rapidly increased to 14% as eight new states formed a P-16 council. The hazard function declined again in 2006 when only the state of New Hampshire formed a P-16 council, but increased to 20% in 2007 when two of the remaining twenty states in the risk set (Colorado and Wyoming) experienced the event.

The survival function represents the cumulative probability that a state will continue to operate without a P-16 council by a given time. For state adoption of any type of P-16 council, the final survival rate of 0.37 indicates that 37% of the states in the sample (or 18 states) had not formed a P-16 council by 2007. The graph of the survival function in Figure 2 illustrates how the survival function declines from 1992 to 2007 for the adoption of any form of P-16 council. The survival function gradually tapers down at a fairly constant rate, with the greatest decrease from 2004 to 2005.

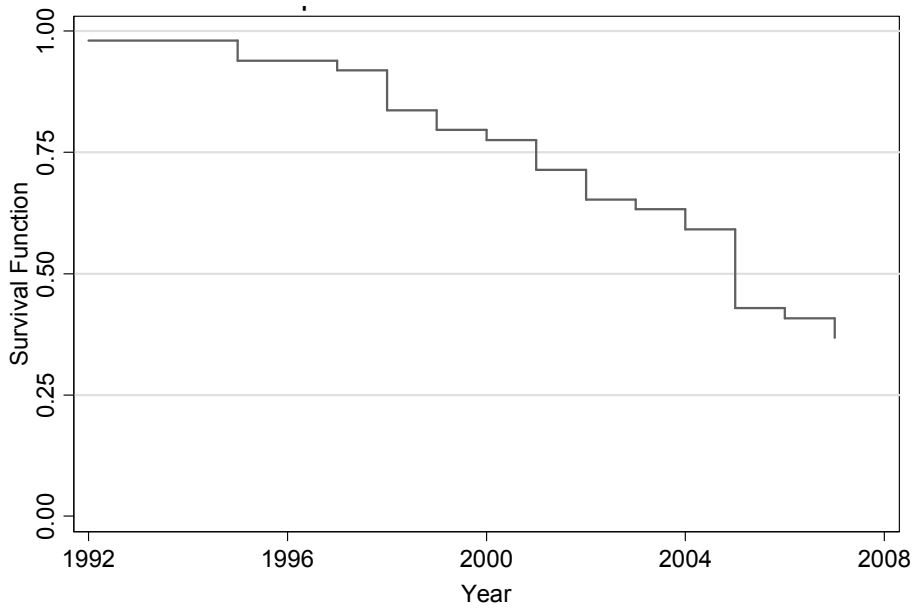

Figure 2. Survival function: Formation of any P-16 council.

The hazard function for state formation of mandatory P-16 councils is lower than the hazard function for state formation of any type of P-16 councils, with a value of less than 1% for all years prior to 2005. In 2005 there is a modest increase in the hazard function to 6.8% as six new states formed a mandatory P-16 council. The greatest increase in the hazard function occurs in 2007 when five of the remaining thirty-three states at-risk formed a mandatory P-16 council. This indicates that states without a mandatory P-16 council were most likely to form one in the last year of the analysis. The final survival function of 0.5714 indicates that just over half of the states in the sample had not formed a mandatory P-16 council by 2007. As illustrated in Figure 3, the survival function declined much less consistently over time than the survival function for state formation of any P-16 council. There was relatively little change in the survival function from 1992 to 2002, when over 90% of the sample remained at-risk for forming a

mandatory P-16 council. However, the survival function declined quickly during the last five years of the analysis as seventeen states formed mandatory P-16 councils.

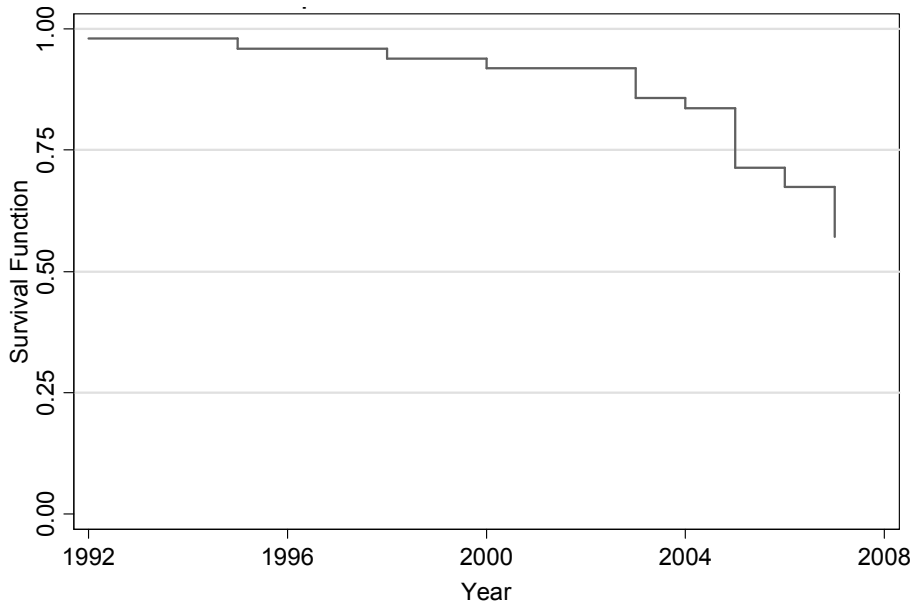

Figure 3. Survival function: Formation of a mandatory P-16 council.

Results for State Formation of Any P-16 Council

The multivariate event history analysis for the hazard of adopting any type of P-16 council reveals several interesting results. Many of the environmental characteristics of states had a statistically significant effect on policy adoption, indicating that the decision to form a statewide P-16 council is largely influenced by the conditions of the surrounding environment. However, there is no evidence that states' organizational structures or gubernatorial leadership have an effect on the formation of these types of P-16 councils that were formed primarily through voluntary collaborations of state agencies.

The results of the Cox proportional hazards models for the formation of any type of P-16 council are presented in Table 10. Model 1 represents the hypotheses for the organizational structures and includes variables for the share of K-12 funding from state sources and the presence of a consolidated governing board for higher education. Neither of these variables has a significant effect on the formation of any type of P-16 council and the overall model fails to reach statistical significance (prob.> χ^2 =0.717). This indicates that the level of centralization of authority among a state's K-12 and higher education systems does not tend to influence the decision to form P-16 councils as anticipated.

The hypotheses related to leadership influences are tested in Model 2 with the variables representing the percent of the governor's agenda on education, governor's educational appointment power, governor's personal powers, governor's leadership in professional networks, and gubernatorial election year. The percent of the governor's agenda on education has a statistically significant and positive effect, indicating that the presence of an "education governor" tends to increase the likelihood of a state forming any type of P-16 council. However, this finding is not robust across multiple specifications of the model. There is no effect from any of the other variables relating to the characteristics of the governor or the electoral cycle, and the overall model is not statistically significant (prob.> χ^2 =0.175). Therefore, there is also a lack of empirical evidence that gubernatorial leadership influences have a significant role in increasing the likelihood of a state forming any P-16 council.

Table 10

Results of Cox Proportional Hazards Models for Formation of Any Type of P-16 Council (Standard Errors in Parentheses)

	Model 1		Model 2	
Variable	Coeff	Exp (Coeff)	Coeff	Exp (Coeff)
Organizational structures:				
Share of K-12 funding from state sources	0.002	1.002		
	(0.015)			
Consolidated governing board	-0.309	0.734		
	(0.388)			
Leadership influences:				
Percent of the governor's agenda on education			0.043 *	1.044
			(0.018)	
Governor's educational appointment power			-0.057	0.944
			(0.153)	
Governor's personal powers			0.147	1.158
			(0.325)	
Governor's leadership in professional networks			-0.229	0.795
			(0.540)	
Gubernatorial election year			0.701	2.015
			(0.598)	
Environmental characteristics:				
Percent of state jobs requiring a BA or higher				
Unemployment rate				
Chance for college by age 19				
Total population (logged)				
Log Likelihood	-87.70		-84.25	
Likelihood Ratio	0.67		7.56	
Degrees of Freedom	2		5	
Prob > Chi-Squared	0.717		0.175	
Sample Size	49		49	

~p=0.10, *p=0.05, ** p=0.01

Table 10 (Continued)

Variable	Model 3 Coeff	Model 3 Exp (Coeff)	Model 4 Coeff	Model 4 Exp (Coeff)
Organizational structures:				
Share of K-12 funding from state sources			0.002	1.002
			(0.019)	
Consolidated governing board			0.130	1.139
			(0.479)	
Leadership influences:				
Percent of the governor's agenda on education			0.027	1.027
			(0.019)	
Governor's educational appointment power			0.052	1.054
			(0.165)	
Governor's personal powers			0.099	1.105
			(0.353)	
Governor's leadership in professional networks			-0.304	0.738
			(0.570)	
Gubernatorial election year			0.496	1.643
			(0.597)	
Environmental characteristics:				
Percent of state jobs requiring a BA or higher	-0.140	0.869	-0.125	0.882
	(0.094)		(0.104)	
Unemployment rate	-0.601 *	0.548	-0.580 *	0.560
	(0.243)		(0.251)	
Chance for college by age 19	-0.080 *	0.923	-0.075 *	0.928
	(0.033)		(0.036)	
Total population (logged)	0.761 **	2.141	0.707 *	2.028
	(0.248)		(0.279)	
Log Likelihood	-78.99		-77.50	
Likelihood Ratio	18.09		21.06	
Degrees of Freedom	4		11	
Prob > Chi-Squared	0.001		0.033	
Sample Size	49		49	

~p=0.10, *p=0.05, ** p=0.01

Model 3 includes variables for the environmental characteristics of states including the percent of state jobs requiring a bachelor's degree or higher, unemployment rate, chance for college by age 19, and total population size. One somewhat surprising finding is that there is a statistically significant, negative effect of unemployment. This indicates that states with high unemployment rates are less likely to form any type of P-16 council than states with strong economic conditions. This effect is opposite of the hypothesized direction, and will be discussed in greater detail after checking the diagnostic tests for the model. Two other environmental characteristics of states have a significant effect on the likelihood of forming any P-16 council in the hypothesized direction. There is a significant, negative effect of chance for college by age 19. Weak educational climates, as indicated by a low percentage of 19-year olds making the transition to college, tend to increase the likelihood that a state will form a P-16 council. In addition, there is a positive effect of the logged value of the total state population size. Thus states with large populations are more likely to form a P-16 council than smaller states. The overall model is highly significant (prob.> χ^2 =0.001), indicating that environmental characteristics of states have an important influence on the probability of forming a P-16 council.

The variables from all three sets of hypotheses are included in Model 4 and the results are very similar to the restricted Models 1-3. Unemployment rate and chance for college by age 19 continue to have a statistically significant, negative effect on the likelihood of forming a P-16 council; while the positive effect of total population also remains. There is no significant effect from any of the variables representing organizational structures or leadership influences. A likelihood-ratio test indicated that

unrestricted Model 4 does not provide a significant improvement in model fit over the restricted Model 3 (prob.> χ^2 =0.8875). However, since the variables representing organizational structures and leadership influences are being used to test the applicability of network theory to state formation of P-16 councils, the fully specified Model 4 will be considered as the final model for interpreting all of the findings. [12] As a result, the magnitude of the effects presented later in this section may be slightly underestimated compared to what they would have been if the restricted Model 3 was selected as the final model.

Diagnostic Tests

A series of diagnostic tests were run on the final model for the hazard of forming any statewide P-16 council. First, Schoenfeld residuals were calculated for the Grambsch and Therneau (1994) test for the proportional hazards assumptions of the Cox model. The null hypothesis is that the hazard rates at different values of the covariates are proportional over time. The global test from the Schoenfeld residuals is not statistically significant (prob.> χ^2 =0.40), which suggests that overall the final model does not violate the proportional hazards assumption (see Table 11). The local tests using the scaled Schoenfeld residuals also result in a failure to reject the null hypothesis for each of the individual variables at traditional levels of statistical significance (prob.> χ^2 =0.05).

[12] The variable for the proportion of the governor's agenda on education was also added to the restricted Model 3, since this variable is statistically significant in Model 2. After controlling for the environmental conditions of states, this variable is no longer statistically significant. A Wald test also indicates that the education governor variable does not improve the overall fit of Model 3 (prob.> χ^2 =0.1792).

Table 11
Nonproportionality Tests for State Formation of Any P-16 Council

	ρ	χ2	prob>χ2
Share of K-12 funding from state sources	0.00	0.00	0.99
Consolidated governing board	0.21	2.17	0.14
Percent of the governor's agenda on education	0.22	1.46	0.23
Governor's educational appointment powers	0.17	1.11	0.29
Governor's personal powers	0.26	1.85	0.17
Governor's leadership in professional networks	-0.03	0.05	0.83
Gubernatorial election year	0.13	0.50	0.48
Percent of state jobs requiring a BA or higher	0.00	0.00	0.97
Unemployment rate	0.30	3.46	0.06
Chance for college by age 19	0.00	0.00	0.99
Total population (logged)	0.04	0.09	0.77
GLOBAL TEST		11.58	0.40

Next, the deviance residuals were calculated and plotted against the predicted values from the final model to identify any observations that are poorly fit by the model. The graph of the deviance residuals should be symmetric around zero if the model is a good fit for the data (Box-Steffensmeier & Jones, 2004). As illustrated in Figure 4, most of the deviance residuals are randomly scattered around zero with values within ±2. The slightly higher value for Maryland indicates that this state formed a P-16 council sooner than predicted based on the characteristics of the state. The comparatively low residual for Alabama means that the state did not form a P-16 council as the model would have predicted based on its characteristics. Overall, the model appears to fit the data relatively well. Alaska and Hawaii are commonly omitted from comparative state policy studies due to their outlier values on numerous indicators (e.g. Berry & Berry 1990; Mintrom 1997), however the deviance residuals for these states are relatively small indicating that their inclusion does not appear to pose any problems in this analysis.

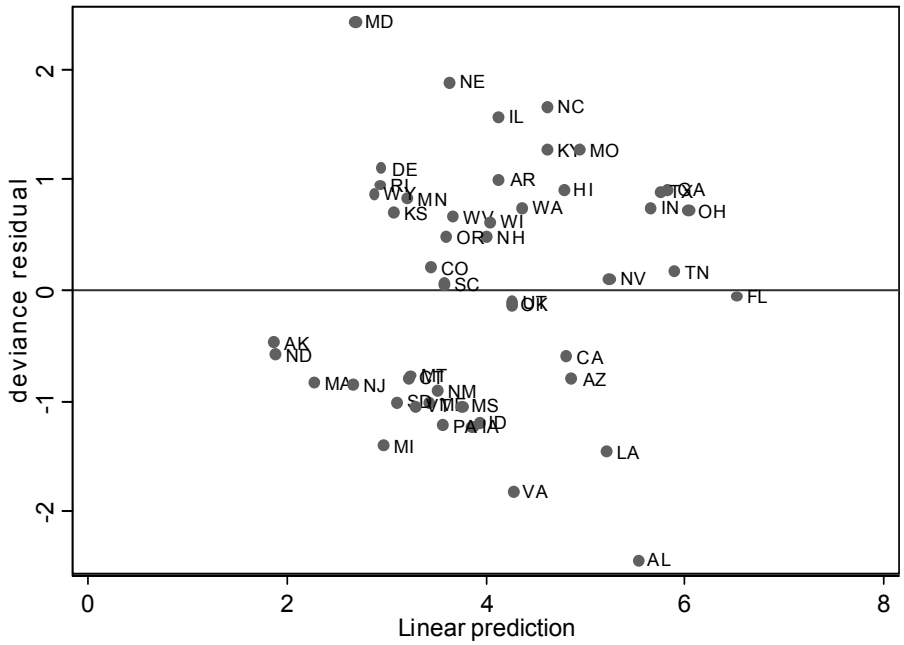

Figure 4. Deviance residuals for state formation of any P-16 council.

Interpretation of the Effects of Significant Covariates

For each of the significant variables in the final model, the magnitude of the effects can be illustrated by graphing the predicted values of the survival function over time by different hypothetical values of these covariates. High values close to one for the survival function indicate that a state is likely to continue to operate under separate educational systems, while low values close to zero represent states that are likely to form any type of P-16 council. On each graph, the survival functions will be provided for a state with an average value of the covariate of interest, a high value of one standard deviation above the mean, and a low value of one standard deviation below the mean. All other variables are held constant at their mean values.

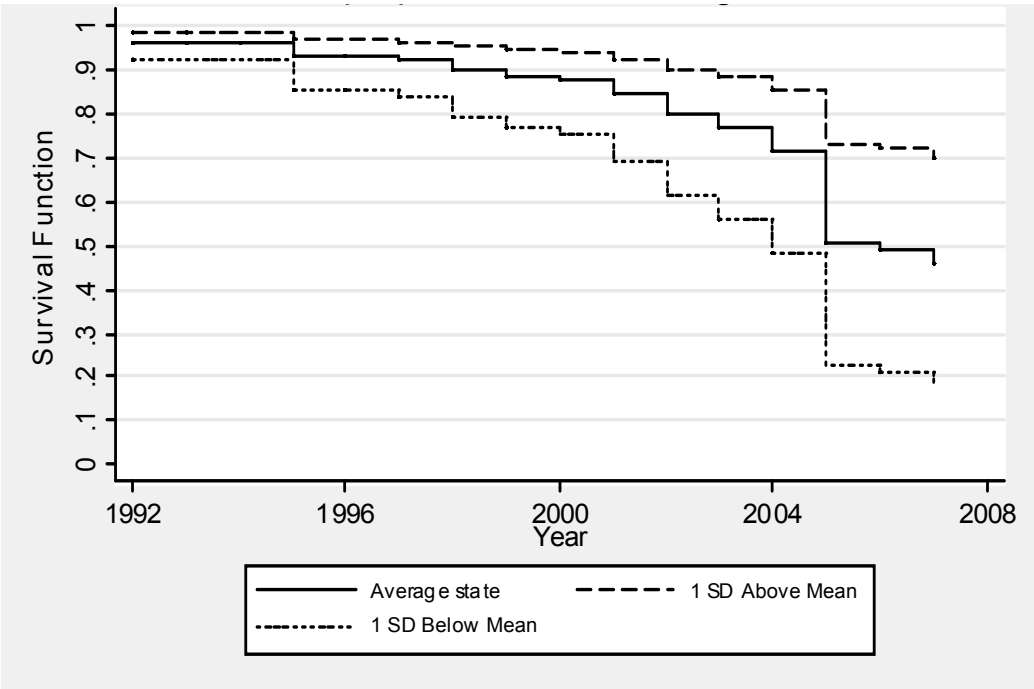

Figure 5. State formation of any P-16 council: Survival functions by unemployment rate.

The first significant finding from the final model is that the state unemployment rate has a negative effect on the likelihood of forming any statewide P-16 council. A 1% increase in the state unemployment rate is associated with a 44% decrease in the estimated hazard of forming any P-16 council.[13] Figure 5 illustrates the predicted survival function for the formation of any P-16 council among states with high, average, and low values of unemployment. In 2007, the predicted probability of survival for states with the highest levels of unemployment is 0.66, whereas for those with the lowest level of unemployment the predicted survival rate is only 0.14. These results indicate that states with high unemployment are most likely to continue to operate separate K-12 and higher education systems without a P-16 council. This contradicts the original hypothesis that

[13] The substantive interpretation of the coefficients in the final model is calculated as follows: A one-unit increase in X leads to an estimated 100*(exp(β)-1)% change in the hazard of the event.

states with poor fiscal conditions may be more likely to adopt education reforms like P-16 councils in an effort to ensure that public resources are being used efficiently and to reduce costly programs such as college remediation. Instead, it appears that states with weak economic conditions might be anticipating the need for additional funding to support new P-16 initiatives if a P-16 council is adopted.

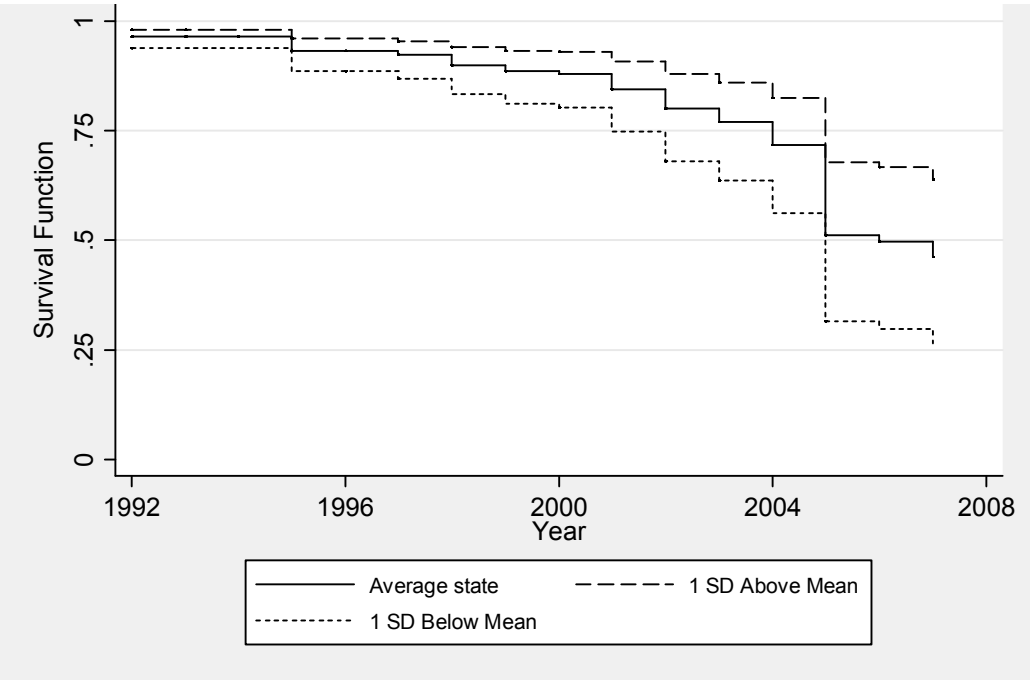

Figure 6. State formation of any P-16 council: Survival functions by chance for college by age 19.

Second, there is a significant, negative effect of chance for college by age 19 on the likelihood of forming any P-16 council. A 1% increase in the percentage of 19 year-olds continuing on to college is predicted to decrease the proportional hazard for forming any type of P-16 council by 7.2%. As illustrated in Figure 6, the predicted survival probability in 2007 is 0.59 for states with the highest rates of students making the

transition to college, and 0.21 for states with the lowest rates. This finding supports the original hypothesis that educational problems may motive states to implement new education reform policies such as P-16 councils.

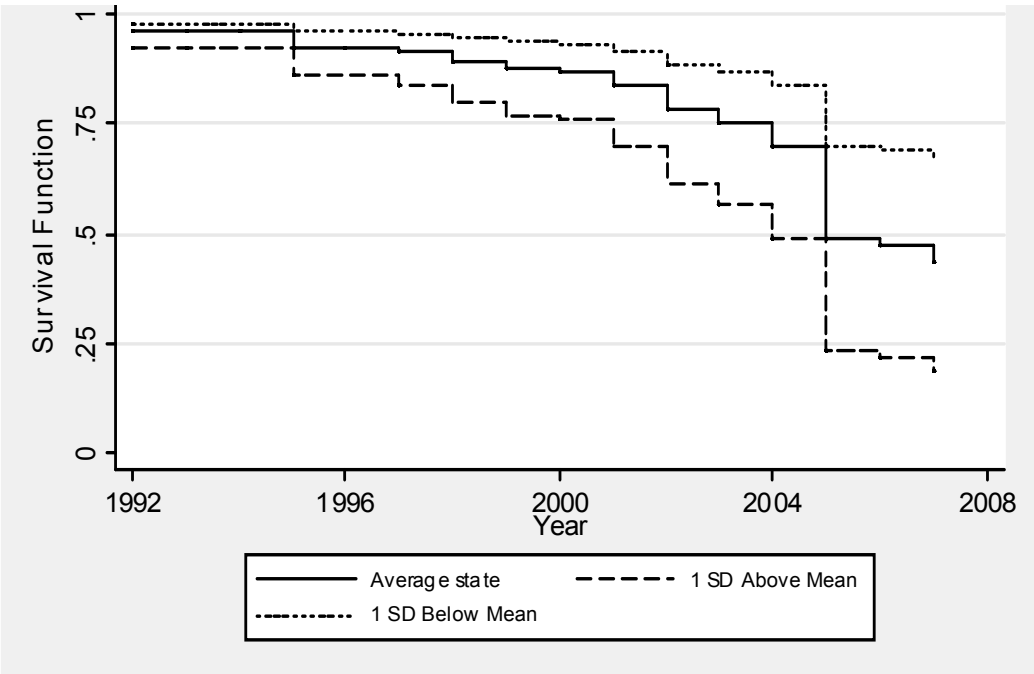

Figure 7. State formation of any P-16 council: Survival functions by total state population.

Third, the total state population has a positive effect on the likelihood of forming any P-16 council. A 1% increase in the state population is associated with a 10.28% increase in the likelihood of forming any P-16 council. The graph of the predicted survival functions in Figure 7 shows that in 2007, states with the largest populations have a predicted survival probability of only 0.16 for forming any P-16 council, whereas states with the smallest populations have a predicted survival probability of 0.64. These results indicate that large states are much more likely to form a P-16 council than small states. As hypothesized, the size of the state's population may affect the state's capacity for

trying new policy innovations and the level of demand for new organizational structures such as P-16 councils.

The relative magnitude of the effect of each of the significant covariates can be compared by examining the predicted survival probabilities at different hypothetical values of state characteristics. Table 12 provides the predicted survival probabilities for the formation of any P-16 council in 2007 for states with high, average, and low values of significant covariates. These values correspond with the graphs shown in Figures 5, 6, and 7 above. Overall, it appears that economic, educational, and demographic characteristics of states all have an effect of similar magnitude on the likelihood of forming a P-16 council. The greatest predicted survival probabilities for states within one standard deviation of these covariates ranges from 0.59 for states with the highest values of chance for college by age 19 to 0.66 for states with the highest unemployment rates. All of these values are considerably higher than the average survival probability of 0.40, indicating that the findings are both statistically and substantively significant.

Table 12
Predicted Survival Probabilities for Formation of Any P-16 Council in 2007 for States with High, Average, and Low Values of Significant Covariates

	High (Mean + 1SD)	Average (Mean)	Low (Mean - 1SD)
Unemployment rate	0.66	0.40	0.14
Chance for college by age 19	0.59	0.40	0.21
Total state population (logged)	0.16	0.40	0.64

Predicted Survival Probabilities in 2007, by State

The results from this analysis can also be utilized to provide information that may be useful to state policymakers. The predicted survival probabilities can be used to estimate which states are mostly likely to continue to operate under separate educational systems. The graph in Figure 8 shows the predicted probability of survival by state in 2007 for those states that have not yet formed a P-16 council. The states of Alabama and Louisiana have the lowest predicted probability of continuing without a P-16 council. In 2007, both of these states had unemployment rates that were below the national average (3.6% and 4.0%, respectively), indicating relatively strong economic conditions. Both states were near the bottom quartile of the percentage of 19-year olds making the transition to college, so they faced similar problems with state education conditions. Among the states that are still at-risk of forming a P-16 council, Alabama and Louisiana tend to be relatively large with total populations above the national average.[14]

Together the similar economic, educational, and demographic conditions in Alabama and Louisiana make it unlikely that either of these states will continue without a P-16 council. Although it is too early to tell whether these states will actually form a P-16 council in the near future, there is some evidence that both of these states are actively pursuing efforts to improve P-16 collaboration. In Alabama, Governor Riley issued an executive order in 2007 to reorganize the Department of Workforce Development (Riley, 2007). The membership of the department was modified to include the Chancellor of the Alabama College System, the Director of the Alabama Industrial Training Institute, and the State Superintendent of Education. The purpose of the department is to address

[14] The most highly populated states such as Texas, California, and Florida have already formed P-16 councils so Alabama and Louisiana are relatively large compared to the remaining states that are at-risk for policy adoption.

workforce development issues rather than P-16 education, so this executive order does not meet the "function" criteria for a P-16 council in this analysis. However, it does indicate that the state is actively seeking to increase collaboration among different education sectors. Also within the past year, the state of Louisiana sent a team of representatives from K-12 and higher education to participate in "alignment institutes" sponsored by Achieve, Inc (Olson, 2006). These institutes are designed to assist states in creating programs that align high school exit standards with postsecondary and workforce skills. The policymakers in Louisiana drafted standards for Achieve and the state governing board to approve in 2007, which represents an important step in improving P-16 collaboration despite the absence of a P-16 council.

The states of Alaska and North Dakota have the highest predicted probability of continuing without a P-16 council. Both of these states have very small total populations, nearly two standard deviations below the national average. Alaska had one of the highest unemployment rates in the country during 2007 (6.7% compared to the national average of 4.4%), indicating that the economic conditions of the state are particularly unfavorable for the likelihood of forming a P-16 council. North Dakota had the highest percentage of 19-year olds making the transition to college (57.2%), so the strong educational conditions in the state may reduce the demand on state policymakers for new educational reforms such as P-16 councils.

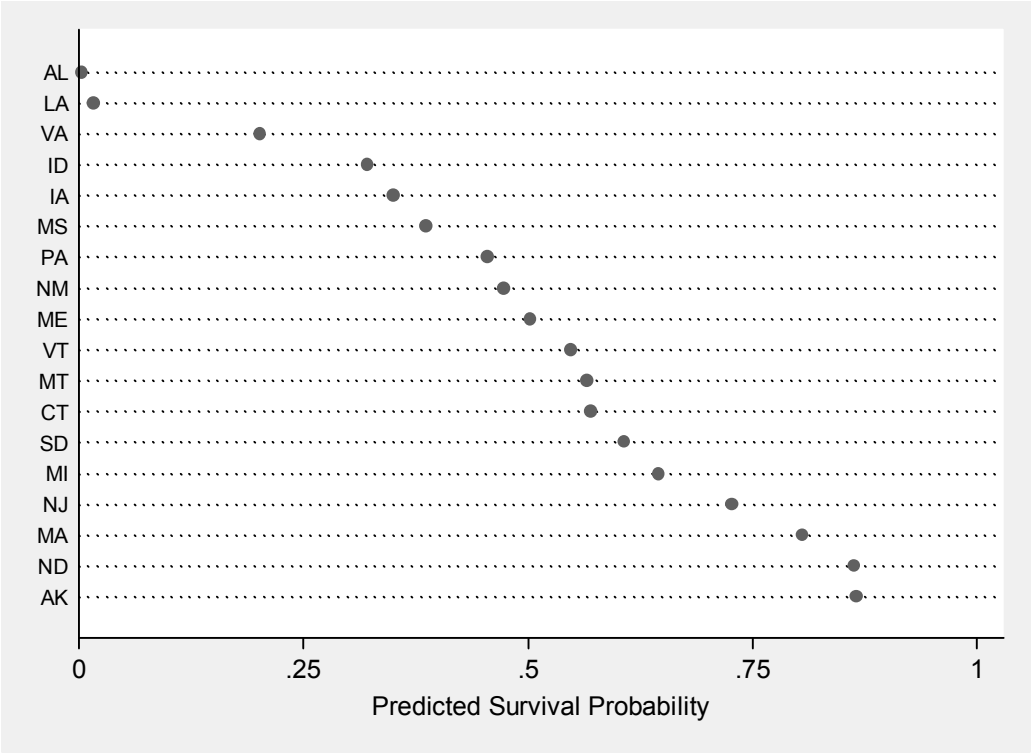

Figure 8. Predicted probability of survival by state: State formation of any P-16 council in 2007.

Results for State Formation of a Mandatory P-16 Council

The second part of the multivariate analysis examines factors that influence the hazard of adopting mandatory P-16 councils, which have been initiated by executive orders of the governor or legislative statutes. The results indicate both similarities and differences among the set of factors that may facilitate or impede the spread of these councils compared to the process of state adoption of more informal P-16 councils. Similar to the previous findings, poor educational climates may increase the likelihood of forming a mandatory P-16 council. In addition, there appears to be no effect from the organizational structures of the state's educational systems. However, one of the major differences between the two sets of analyses is that the percent of the governor's agenda

on education significantly increases the likelihood that a state will form a mandatory P-16 council. State economic and demographic conditions, which are important for predicting the likelihood of adopting informal P-16 councils, have no effect on the probability of forming mandatory P-16 councils.

Table 13 provides the results of the Cox proportional hazards model for the formation of mandatory P-16 councils. In Model 1, neither of the variables representing organizational structures (share of K-12 funding from state sources and consolidated governing board in higher education) is statistically significant. In addition, the model as a whole fails to reach statistical significance (prob.> χ^2 =0.679), indicating that organizational structures do not increase the likelihood that a state will form a mandatory P-16 council as hypothesized.

Model 2a represents the gubernatorial leadership influences in a state with variables for the percent of the governor's agenda on education, governor's educational appointment power, governor's personal powers, governor's leadership in professional networks, and gubernatorial election year. The variable for the percent of the governor's agenda on education has a positive effect on the likelihood of forming a mandatory P-16 council at a high level of statistical significance ($p<0.01$). This indicates that "education governors", who devote a large share of their agendas to education issues, may have a key leadership role in requiring the K-12 and higher education sectors to work together. However, the other characteristics of governors (appointment powers, personal powers, leadership in professional networks, and election year) do not significantly affect the probability of forming a mandatory P-16 council.

Table 13
Results of Cox Proportional Hazards Models for Formation of a Mandatory P-16 Council (Standard Errors in Parentheses)

	Model 1		Model 2a		Model 2b	
Variable	Coeff	Exp (Coeff)	Coeff	Exp (Coeff)	Coeff	Exp (Coeff)
Organizational structures:						
Share of K-12 funding from state sources	-0.003	0.997				
	(0.017)					
Consolidated governing board	-0.401	0.670				
	(0.481)					
Leadership influences:						
Percent of the governor's agenda on education			0.075 **	1.078	0.274	1.315
			(0.023)		(0.204)	
Governor's educational appointment power			0.114	1.121	0.058	1.060
			(0.180)		(0.453)	
Interaction with education governor					0.004	1.004
					(0.019)	
Governor's personal powers			0.304	1.356	1.348	3.850
			(0.443)		(1.023)	
Interaction with education governor					-0.054	0.947
					(0.047)	
Governor's leadership in professional networks			-0.681	0.506	0.310	1.364
			(0.668)		(1.344)	
Interaction with education governor					-0.048	0.953
					(0.056)	
Gubernatorial election year			-0.460	0.632	-0.708	0.492
			(0.853)		(1.655)	
Interaction with education governor					-0.008	0.992
					(0.067)	
Environmental characteristics:						
Percent of state jobs requiring a BA or higher						
Unemployment rate						
Chance for college by age 19						
Total population (logged)						
Log Likelihood	-62.44		-56.40		-55.19	
Likelihood Ratio	0.77		12.84		15.27	
Degrees of Freedom	2		5		9	
Prob > Chi-Squared	0.679		0.025		0.084	
Sample Size	49		49		49	

~p=0.10, *p=0.05, ** p=0.01

Table 13 (Continued)

Variable	Model 3 Coeff	Model 3 Exp (Coeff)	Model 4 Coeff	Model 4 Exp (Coeff)
Organizational structures:				
Share of K-12 funding from state sources			-0.014	0.986
			(0.020)	
Consolidated governing board			-0.223	0.800
			(0.618)	
Leadership influences:				
Percent of the governor's agenda on education			0.064 **	1.066
			(0.024)	
Governor's educational appointment power			0.187	1.206
			(0.201)	
Interaction with education governor				
Governor's personal powers			0.573	1.773
			(0.496)	
Interaction with education governor				
Governor's leadership in professional networks			-0.335	0.715
			(0.723)	
Interaction with education governor				
Gubernatorial election year			-0.362	0.697
			(0.887)	
Interaction with education governor				
Environmental characteristics:				
Percent of state jobs requiring a BA or higher	0.017	1.017	0.056	1.058
	(0.099)		0.114	
Unemployment rate	-0.427 ~	0.652	-0.493 ~	0.611
	(0.254)		(0.298)	
Chance for college by age 19	-0.105 **	0.901	-0.119 *	0.888
	(0.041)		(0.050)	
Total population (logged)	0.469 ~	1.599	0.362	1.437
	(0.270)		(0.340)	
Log Likelihood	-56.99		-51.47	
Likelihood Ratio	11.67		22.70	
Degrees of Freedom	4		11	
Prob > Chi-Squared	0.020		0.020	
Sample Size	49		49	

~p=0.10, *p=0.05, ** p=0.01

In order to test more specifically whether "education governors" possessing high values of these leadership characteristics are *even more likely* to form a mandatory P-16 council, interaction terms between the percent of the governor's agenda on education and each of the other leadership variables are added in Model 2b.None of the variables are statistically significant and a likelihood-ratio test indicates that the interaction terms do not improve the overall fit of the model (prob.> χ^2 =0.658). Alternate specifications were also tested by adding each interaction term separately to model 2a (results not shown here). Additional likelihood-ratio tests indicate that none of these interaction terms significantly improve the model fit. As a result, none of the interaction terms are included in future models since the addition of these variables uses additional degrees of freedom and inflates the standard errors.

The variables representing the hypotheses for the environmental characteristics of states are included in Model 3. There is a highly significant, negative effect of chance for college by age 19. This indicates that the likelihood of forming a mandatory P-16 council is greater if a state has a low percentage of 19-year olds making the transition to college. At a lower level of statistical significance ($p<0.10$), the unemployment rate and total state population are both predicted to affect the likelihood of forming a mandatory P-16 council. However, these variables are no longer significant after adjusting the model for issues that arise in the diagnostic tests in the next section.

The fully specified Model 4 includes all of the variables representing organizational structures, leadership influences, and environmental characteristics. The results are very similar to Models 1, 2a, and 3. The percent of the governor's agenda on education is predicted to increase the likelihood of forming a mandatory P-16 council,

while the chance for college by age 19 is negatively associated with the likelihood of forming a mandatory P-16 council. The variable for unemployment rate is significant at the 10% level; but as mentioned earlier, it is no longer significant after adjusting the model for issues that arise in the diagnostic tests in the next section.

Diagnostic Tests

The proportional hazards assumption was tested in Model 4 by examining whether the Schoenfeld residuals vary significantly as a function of time (see Table 14). The results from the global test are statistically significant (prob.> χ^2 =0.04), which indicates that one or more of the variables in the model violate the proportional hazards assumption. The scaled Schoenfeld residuals provide evidence that the variables for share of K-12 funding from state sources, consolidated governing board, proportion of the governor's agenda on education, and total population (logged) may all have time-varying coefficients. As Box-Steffensmeier, Reiter, and Zorn (2003) note, when analyzing social science outcomes, it is not uncommon for the "relative magnitude of an independent variable's influence to vary over the life of a process; that is, the covariate's effect may be weaker or stronger at the beginning of the state than it is later" (p. 34). There may be theoretical explanations for these nonproportional hazards, such as social learning processes and the development of institutional norms. For example, if P-16 councils demonstrate success in many states over time and become a widely advocated policy response, the presence of an "education governor" may not be as important for initiating a mandatory P-16 council as it would have been in the early years of the policy adoption process when little was known about P-16 reform.

Table 14

Nonproportionality Tests for State Formation of a Mandatory P-16 Council

	ρ	χ2	prob>χ2
Share of K-12 funding from state sources	-0.42	3.95	0.05
Consolidated governing board	-0.45	6.83	0.01
Percent of the governor's agenda on education	-0.51	6.15	0.01
Governor's educational appointment powers	-0.08	0.17	0.68
Governor's personal powers	0.01	0.00	0.97
Governor's leadership in professional networks	0.25	1.66	0.20
Gubernatorial election year	-0.21	1.56	0.21
Percent of state jobs requiring a BA or higher	0.01	0.01	0.94
Unemployment rate	0.26	1.08	0.30
Chance for college by age 19	-0.18	0.67	0.41
Total population (logged)	-0.49	6.92	0.01
GLOBAL TEST		20.38	0.04

Instead of relying exclusively upon the test statistics from the nonproportionality tests, it is important to examine plots of the residuals against time to determine whether these results are being driven by a few outlier cases (Therneau & Grambsch, 2001). The graphs in Figure 9 indicate that the nonproportionality of the variables for share of K-12 funding from state sources and percent of the governor's agenda on education appear to be largely attributed to the characteristics of the first two or three states to adopt a mandatory P-16 council. The plot in the top left for share of K-12 funding from state sources shows that the Schoenfeld residuals for Georgia, North Carolina, and Indiana are all greater than 0. These were the only three states to form mandatory P-16 councils before 2000, and they all had slightly higher than average shares of K-12 funding from state sources.[15] This pattern likely occurred by chance, rather than a systematic change in

[15] The values for share of K-12 funding from state sources was 63% for North Carolina, 52% for Georgia, and 53% for Indiana compared to the national average of 50%.

the effect of the variable over time. The residuals appear to be distributed fairly evenly above and below zero after the year 2000 when the number of events increased.

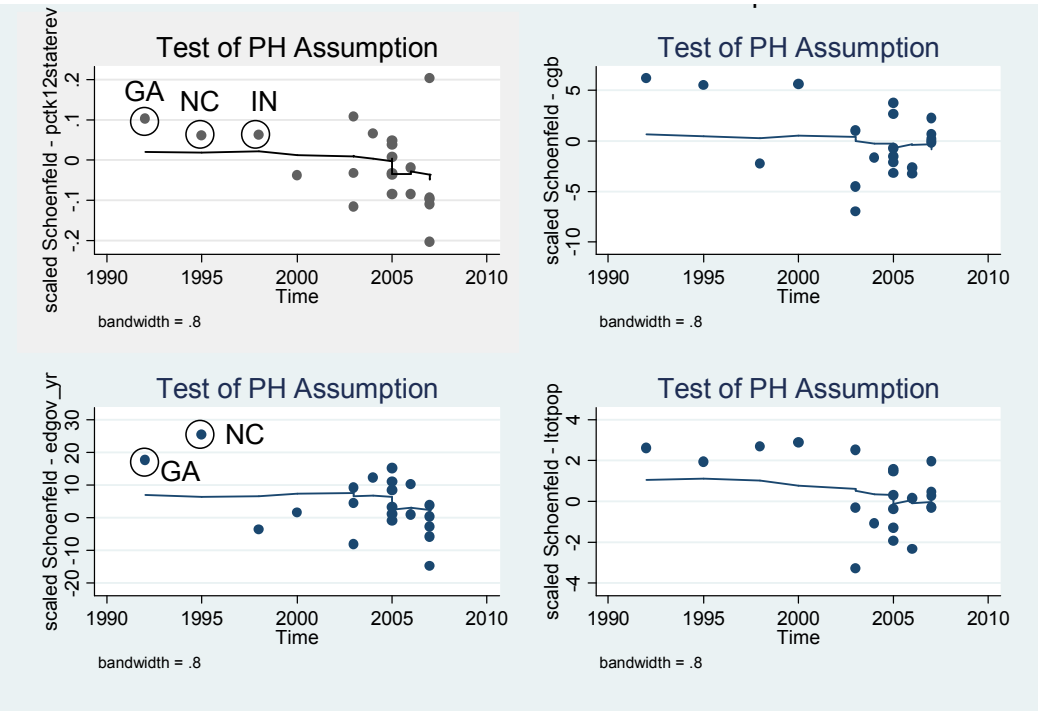

Figure 9. Plots of Schoenfeld residuals for non-proportional hazards.

The plot in the lower left for the percent of the governor's agenda on education also appears to be disproportionately influenced by the residuals for Georgia and North Carolina. In the years of policy adoption, Governor Martin of North Carolina devoted over a quarter of his state-of-the-state speech to education, while Governor Miller of Georgia spent nearly half of his speech on education. These values are both substantially higher than the national average of 16% of the governor's agenda on education. For all years between 1998 and 2006, governors in states that formed mandatory P-16 councils dedicated an average of 21% to 30% of their state-of-the-state speeches to education, so

the effect of "education governors" does not appear to diminish much over time. The only exception is 2007 when the average percent of the governor's agenda on education was 15%. However, this is largely due to the state of Maryland where Governor O'Malley only spent 7.5% of the state-of-the-state speech on education.

Since the nonproportionality of the variables for *percent of K-12 revenues from state sources* and *percent of the governor's agenda on education* appears to be driven by a few influential cases, no adjustments will be made for these variables. However, in the plots for consolidated governing board (upper right in Figure 9) and total population (lower right), the residuals appear to more non-randomly clustered below 0 in the later years of the analysis. As a result, the model will need to be adjusted to account for these violations to the proportional hazards assumption.

Three common approaches to adjusting the Cox model for nonproportionality include stratifying nonproportional covariates, partitioning the time axis, and creating time-dependent covariates through interactions with time (Therneau & Grambsch, 2001). In the stratification approach, non-proportional covariates are divided into different "stratum" based on their values; for example, separating states into those with a consolidated governing board and those with less centralized postsecondary governance structures. The model is fit separately for each level of stratification and the unique likelihood values for each stratum are summed to calculate the overall likelihood value for the model as a whole. However, stratification may not be the best approach for this analysis because continuous variables (e.g. total population) are not easily categorized into distinct stratum. The second solution of partitioning the time axis involves estimating the model separately at different points of time, such as before and after the median event

time. Yet this approach is also problematic due to the small number of events that occur in this analysis. The third solution of creating time-dependent covariates through interactions with time is the most appropriate for this analysis. The use of interaction terms allows the effect of the non-proportional variables to change over time and also yields more efficient estimates of the other covariates than stratified or time partitioned models.

Model 5 includes interaction terms between the linear function of time[16] and the variables for consolidated governing board and total population (logged) to adjust for the violation of the proportional hazards assumption (see Table 15). The 90% and 95% confidence intervals for both interaction terms include zero, indicating that neither of these variables significantly affects the likelihood of forming a mandatory P-16 council, even after allowing for changes over time in the effect of these variables. The variables for percent of the governor's agenda on education and chance for college by age 19 are both statistically significant at the 1% level and the magnitude of the coefficients for these variables is similar to Model 4.

[16] Interaction terms were also created using the log of time instead of a linear function of time and the results were essentially unchanged.

Table 15

Results for Cox Proportional Hazards Model for Formation of a Mandatory P-16 Council, Including Interactions with Time for Non-Proportional Hazards (Standard Errors in Parentheses)

	Model 5	
Variable	Coeff	Exp (Coeff)
Organizational structures:		
Share of K-12 funding from state sources	-0.017	0.984
	(0.020)	
Consolidated governing board X Time	-0.057	0.945
	(0.050)	
Leadership influences:		
Percent of the governor's agenda on education	0.065 **	1.067
	(0.024)	
Governor's educational appointment power	0.183	1.201
	(0.201)	
Governor's personal powers	0.499	1.647
	(0.483)	
Governor's leadership in professional networks	-0.193	0.824
	(0.721)	
Gubernatorial election year	-0.425	0.654
	(0.878)	
Environmental characteristics:		
Percent of state jobs requiring a BA or higher	0.058	1.060
	(0.109)	
Unemployment rate	-0.442	0.643
	(0.288)	
Chance for college by age 19	-0.132 **	0.877
	(0.050)	
Total population (logged) X Time	0.007	1.007
	(0.026)	
Log Likelihood	-51.36	
Likelihood Ratio	22.93	
Degrees of Freedom	11	
Prob > Chi-Squared	0.018	
Sample Size	49	

~p=0.10, *p=0.05, ** p=0.01

The Schoenfeld residuals are examined for Model 5 to determine whether the interaction terms with time for the consolidated governing board and total population variables resolve the violation of the proportional hazards assumption (see Table 16). The scaled Schoenfeld residuals for both of these variables are no longer statistically significant. The residuals for share of K-12 funding from state sources and percent of the governor's agenda on education remain significant because no adjustments were made to these variables due to the presence of a few influential cases. However, the global test indicates that the model as a whole no longer violates the proportional hazards assumption (prob.> χ^2 =0.24). Therefore, Model 5 will be considered as the final model for all subsequent interpretations of the results.[17]

Table 16
Nonproportionality Tests for State Formation of a Mandatory P-16 Council with Time Interactions for Consolidated Governing Board and Total Population (Logged)

	ρ	χ2	prob>χ2
Share of K-12 funding from state sources	-0.44	4.33	0.04
Consolidated governing board X Time	-0.20	0.93	0.33
Percent of the governor's agenda on education	-0.53	6.42	0.01
Governor's educational appointment powers	-0.05	0.06	0.80
Governor's personal powers	0.05	0.06	0.81
Governor's leadership in professional networks	0.21	0.92	0.34
Gubernatorial election year	-0.21	1.44	0.23
Percent of state jobs requiring a BA or higher	-0.02	0.01	0.91
Unemployment rate	0.22	0.72	0.39
Chance for college by age 19	-0.07	0.09	0.77
Total population (logged) X Time	-0.28	1.87	0.17
GLOBAL TEST		13.89	0.24

[17] Interaction terms between the "education governor" variable and the other leadership influences were also added to the final model that adjusts for the non-proportional hazards over time. As with Model 2b, none of these variables were statistically significant so the results are not reported here.

In Figure 10 the deviance residuals are plotted against the predicted values from Model 5 to identify observations that are poorly fit by the model. Almost all of the deviance residuals are within ±2 and randomly scattered around 0. The state of Tennessee appears to be an outlier with a deviance residual of less than -3, which indicates that the survival time for this state was much longer than expected. However, the variables used to calculate the predicted values are based on the actual conditions of the state in each year. Since there is no reason conceptually to justify omitting Tennessee from the analysis, no changes will be made to the final model.

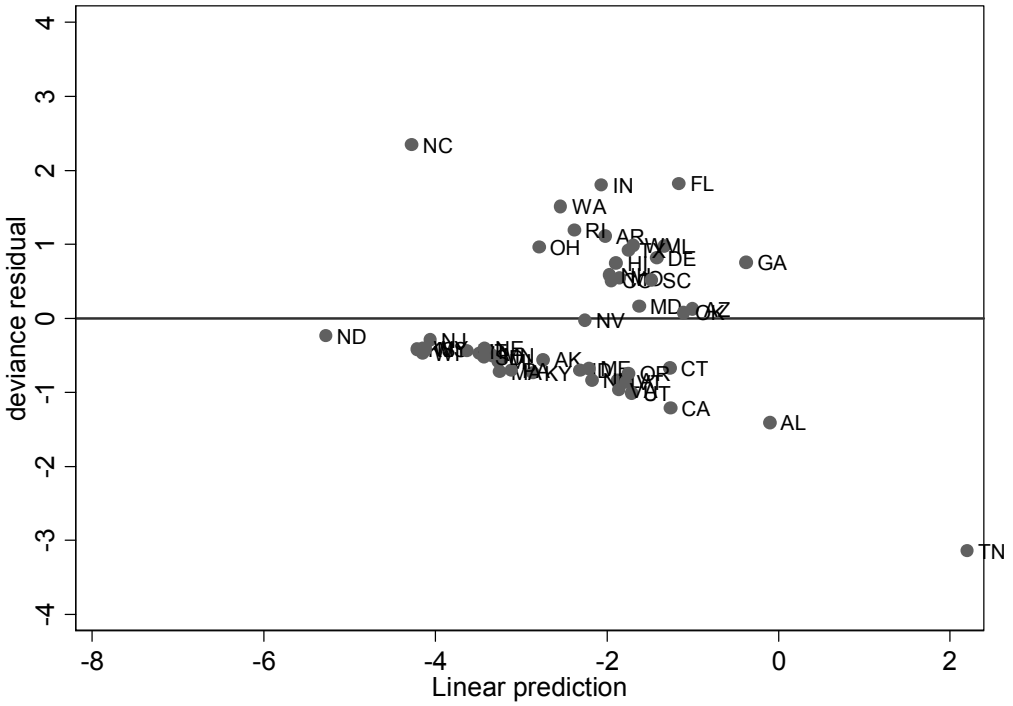

Figure 10. Deviance residuals for formation of a mandatory P-16 council.

Interpretation of the Effects of Significant Covariates

The first significant finding from Model 5 is that the percent of the governor's agenda on education has a positive effect on the likelihood of forming a mandatory P-16 council. A 1% increase in the governor's state-of-the-state speech on education is predicted to increase the proportional hazard of forming a mandatory P-16 council by 6.7%. Figure 11 illustrates the magnitude of the effect of the "education governor" variable by graphing the predicted values of the survival function over time for high, average, and low values of the percent of the governor's agenda on education.[18] In 2007, the predicted survival probability for states with high values of the percent of the governor's agenda on education is 0.62, while the predicted survival probability for states with low values of this variable is 0.89. This finding supports the original hypothesis that states with an "education governor" will be less likely to continue to operate without a mandatory P-16 council.

[18] The predicted values are calculated using the same approach as the results section for state formation of any P-16 council. For the covariate of interest, high values are one standard deviation above the mean and low values are one standard deviation below the mean. All other variables are held constant at their mean values.

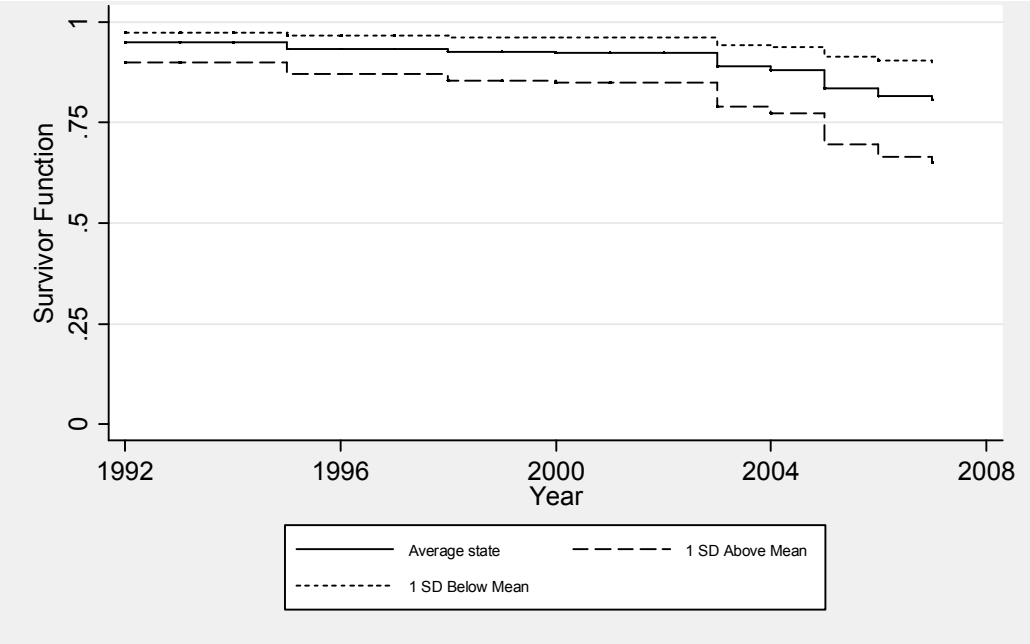

Figure 11. State formation of mandatory P-16 councils: Survivor functions by percent of the governor's agenda on education.

The other significant finding from the final model is that chance for college by age 19 has a negative effect on the likelihood of forming a mandatory P-16 council. Each 1% increase in the percentage of 19-year olds continuing on to college is predicted to decrease the proportional hazard of forming a mandatory P-16 council by 12.4%. As illustrated in Figure 12, the predicted survival probability in 2007 is 0.91 for states with the highest values of chance for college by age 19 and 0.53 for states with the lowest values. This also supports the hypothesis that states experiencing educational problems, such as a low percentage of students making the transition to college, are the least likely to continue to operate without a mandatory P-16 council.

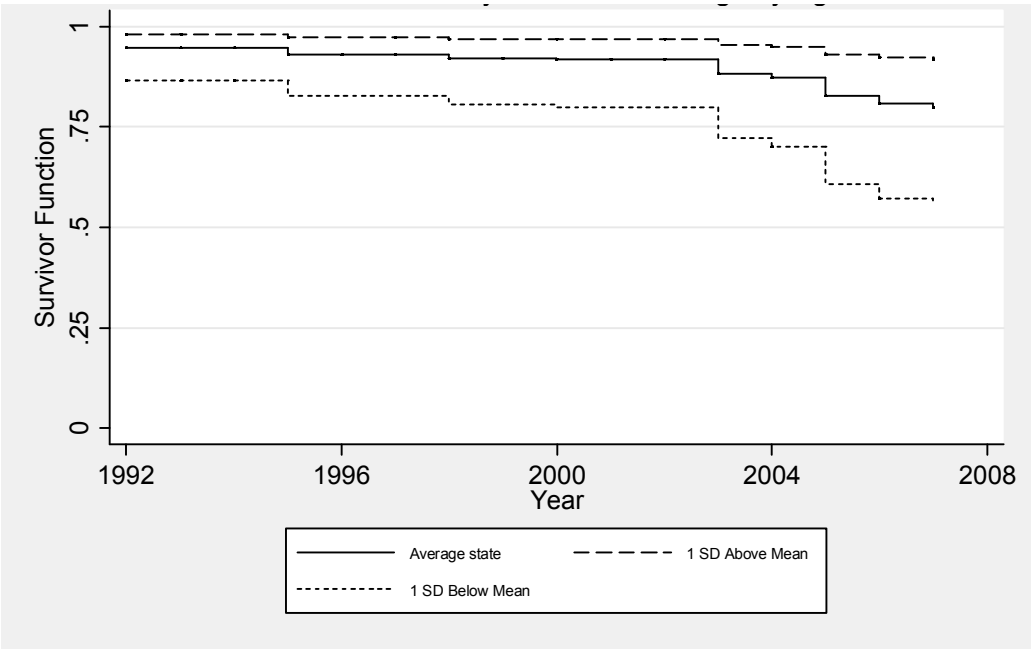

Figure 12. State formation of mandatory P-16 councils: Survivor functions by chance for college by age 19.

Table 17 compares the predicted survival probabilities in 2007 for states with high, average, and low values of each of the significant covariates. The magnitude of the effect of a one standard deviation change in chance for college by age 19 is slightly greater than the effect of a one standard deviation change in the education governor variable. The predicted survival probability for states with the lowest values of chance for college by age 19 is 0.53 compared to the predicted survival probability of 0.62 for states with the highest values of the percent of the governor's agenda on education. However, states with both of these characteristics are much less likely to continue to operate without a mandatory P-16 council than an average state where the predicted survival probability is 0.79.

Table 17
Predicted Survival Probabilities for Formation of a Mandatory P-16 Council in 2007 for States with High, Average, and Low Values of Significant Covariates

	High (Mean + 1SD)	Average (Mean)	Low (Mean - 1SD)
Percent of the governor's agenda on education	0.62	0.79	0.89
Chance for college by age 19	0.91	0.79	0.53

Predicted Survival Probabilities in 2007, by State

Figure 13 shows the predicted probability of survival for each state that has not formed a mandatory P-16 council by 2007. Tennessee and Alabama have the lowest predicted probability of continuing without a mandatory P-16 council, which is largely attributed to the presence of highly education-oriented governors in these states. While the "average" governor only spent 16% of the state-of-the-state speech addressing education issues in 2007, Governor Bredesen in Tennessee devoted 60% of his agenda to education and Governor Riley in Alabama devoted 35% of his agenda to education. Thus both states have strong executive leadership in place to initiate education reforms such as mandatory P-16 councils. In addition, both of these states have below average values for the percent of 19-year olds making the transition to higher education, so environmental pressures may also increase the demand on state policymakers to initiate these organizational structures.

As noted in the findings from the section on state adoption of any P-16 council, Alabama is actively taking steps to improve P-16 collaboration. In 2007, Governor Riley issued an executive order that brings together members from the state's K-12 and higher

education systems to participate in the reorganized Department for Workforce Development. In addition, the state of Tennessee may also be moving in the direction of greater P-16 collaboration. In a recent speech on education, Governor Bredesen (2007) stated, "last month I began a tour of the state to talk with members of our business, educational and civic communities from Memphis to Mountain City about what they believe needs to be done from a state level so that our children have the tools they need for success in their next stage of life – whether that's college or career or a combination of both. With the reforms implemented from these conversations and other research, we will raise the bar for education in Tennessee and set the stage for additional progress moving forward." Thus even though Tennessee lacks a mandatory P-16 council, the governor has been working with leaders across the state to improve collaboration across the educational sectors.

The state of North Dakota has the greatest predicted probability of continuing to operate separate educational systems without a P-16 council in 2007. Governor Hoeven only spent 8% of his state-of-the-state speech addressing education issues in this year (compared to the national average of 16%), which indicates that education reform is unlikely to be a high priority on his agenda. The state also has the highest value in the nation for chance for college by age 19, so there may be fewer environmental pressures to improve P-16 transitions. This state was also among the least likely to form a voluntary P-16 council in the previous set of results.

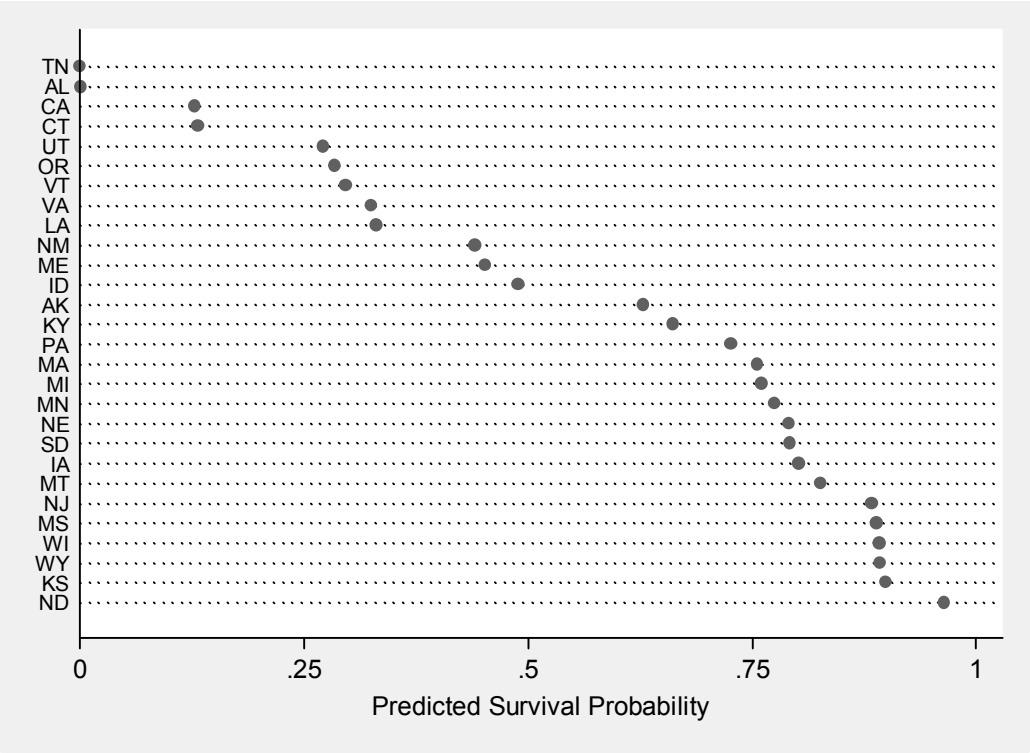

Figure 13. Predicted probability of survival by state in 2007: Formation of mandatory P-16 councils.

Discussion of Findings

So why is it that some states have chosen to form a statewide P-16 council while others have continued to operate separate systems for K-12 and higher education? Overall, the results from this analysis provide empirical support for several of the hypotheses that were posited in the conceptual framework, while also revealing one unanticipated effect in the opposite direction as expected. Although there are some similarities among the types of state characteristics that influence the likelihood of forming all types of P-16 councils, there are also several factors that are unique to state adoption of both mandatory and informal councils.

First, there is a significant negative effect of *chance for college by age 19* on the likelihood of forming both voluntary and mandatory P-16 councils. As hypothesized, there may be increased demand for P-16 reform initiatives in states facing educational problems with students making the transition from K-12 to postsecondary education. This finding is consistent with other studies of state policy innovation in education, which have found that a lack of educational progress in a state is associated with the adoption of school choice legislation (Mintrom, 1997; Mintrom & Vergari, 1998), K-12 accountability policies (McDermott, 2003), charter school laws (Wong & Shen, 2002), and broad-based merit aid programs in higher education (Doyle, 2006).

For mandatory P-16 councils only, the *percent of the governor's agenda on education* significantly increases the likelihood of state policy adoption. This finding is particularly important, as this is the first study to empirically test the effect of governors' priorities in educational reform initiatives. The results support the hypothesis that the presence of "education governors" is important for providing the leadership necessary to bring together diverse network members to create more formal P-16 organizational structures. In addition, it is consistent with other descriptive studies which have found that governors have played a key role in initiating P-16 reform activities (Graves, 2001; Kettlewell, Kaste, & Jones, 2000; Kirst, 2005; Suggs, 2001; Venezia et al., 2005). In some states, governors placing a high priority on education explicitly stated the need for greater P-16 collaboration in their state-of-the-state speeches prior to helping to initiate a mandatory P-16 council. For example, Governor Perry of Texas devoted over one-third of his speech to education in 2001 and stated that, "the success of higher education is greatly dependent on the success of public education. We must build a seamless system

of K through 16 education, starting early in the pre-Kindergarten years all the way through college." Similarly in the state of Washington, Governor Locke discussed education during more than a quarter of the state-of-the-state speech in the year prior to the state's adoption of a mandatory P-16 council. During the speech, he claimed, "we must recognize that the lines we have traditionally drawn between our pre-school and K-12, and between K-12 and college, are artificial. Our education system must be seamless with all components from early learning to graduate school working together as one." These examples illustrate how governors may view P-16 councils as an important reform initiative if they place a high priority on improving the state's education system. It also seems logical that the presence of an "education governor" would be more important for the formation of mandatory P-16 councils rather than informal P-16 councils, since the governor would be able to play a more direct role in the policy adoption process by issuing an executive order or supporting a legislative statute to create these types of organizational structures.

For more informal P-16 councils, state demographic and economic conditions appear to be better predictors of state policy adoption. This indicates that the formation of these types of P-16 councils is driven more by the conditions of the external environment than gubernatorial leadership. Since there is less direction from the state's chief executive officer, these environmental conditions may be particularly important for signaling the need for change to state agency officials. Individuals within independent organizations are often too involved in maintaining day-to-day operations to see the big picture (O'Toole & Meier, 2000), so these environmental conditions may serve as important policy cues that indicate a growing need for P-16 reform.

Among the environmental conditions of states, there is a positive relationship between *total state population* and the likelihood of forming any type of P-16 council. This supports the hypothesis that larger states tend to have greater numbers of students, schools, districts, community colleges, and universities; so they may stand to benefit more from creating a more unified educational system. Evidence of this type of relationship has also been found in the adoption of student unit record systems, where large states are more likely to integrate databases for postsecondary education across institutions than small states (Hearn, McLendon, & Mokher, 2009). States with large populations may also have greater financial and information resources available to experiment with new policy ideas.

Another environmental condition of states that is predicted to increase the likelihood of forming any P-16 council is the presence of low *unemployment rates*. It was originally hypothesized that weak economic conditions may stimulate the adoption of policies like P-16 councils to ensure that state resources are being used efficiently to provide educational services. However, in this study the opposite effect was found, as states with high unemployment rates tend to be the least likely to form any type of P-16 council. One possible explanation for this finding is that states may wait until the economy strengthens before forming P-16 councils so that greater resources may be available to fund new P-16 initiatives such as pre-college outreach programs, teacher training or professional development, and integrated data systems. State economic development may also increase demand for public services, which may encourage greater policy innovation (Berry & Berry, 1992). There is evidence in the literature that states with strong economic conditions are more likely to adopt educational initiatives such as

tuition decentralization policies (Deaton, 2006), postsecondary accountability innovations (McLendon, Heller, & Young, 2005), and certain charter school laws (Renzulli & Roscigno, 2005).

Another unanticipated result of this analysis is that there was no effect from many of the organizational structures, leadership influences, and environmental conditions of states that were predicted to influence the likelihood of forming P-16 councils. Why is it that these factors, which conceptually seem to be critical to network formation, appear to have little to no impact on a state's decision to initiate either formal or informal P-16 councils? Since all of these characteristics have been found to affect other types of state policy innovations, some of these "non-findings" may be just as interesting as the significant results from this analysis. The lack of significant effects from these variables is likely due to a combination of substantive factors relating to the nature of the specific policy area under investigation in this analysis, as well as limitations with the data and operationalization of key independent variables.

Among the organizational structures, the *share of K-12 funding from state sources* did not have an effect on the likelihood of forming voluntary or mandatory P-16 councils. The initial hypothesis was that states with less federal and local government funding would have fewer competing influences in the educational policy environment, which may increase the centralization of state control and facilitate the ability of states to initiate their own reform policies. However, it is also possible that centralized state control could be a disadvantage if there are already concerns that the state has too much power in the education policy arena. The source of funding may reflect the "golden rule" where "he who has the gold makes the rules," so states that contribute a large share of the resources

for K-12 education may already have a heavy hand in the education policy arena (Hodgkinson, 1999; Manna, 2006). In these states, there may be greater resistance to P-16 reform from local schools and districts that are concerned about losing even more autonomy to the state. As indicated in a case study of the formation of Georgia's P-16 council, one major source of resistance to the council's efforts came from proponents of local control in public schools (Suggs, 2001). Thus one possibility is that during the process of state adoption of P-16 councils, the benefits of reduced administrative complexity in a centralized state education system may be counterbalanced by greater resistance among those concerned about the loss of even more local autonomy.

Another possible explanation for the non-significance of state funding is that the data may not adequately represent the complex construct of centralized education control. The variable for the share of K-12 revenues from state sources only directly captures the fiscal dimension of governance, yet as Heinrich and Lynn (2000, p. 3) note, educational governance may also consist of "regimes of laws, administrative rules, judicial rulings, and practices that constrain, prescribe, and enable government activity." In the formation of P-16 councils, it may be more important to consider how much control the state has over areas such as administrative rules since these councils are primarily involved in collaborating on state policy issues. This differs from policy contexts that have direct implications for financial issues, in which case the percentage of K-12 funding from state sources may be a more appropriate proxy for centralized control. For example, Wong and Langevin (2005) found that a greater share of educational revenues from local sources is associated with a decrease in the likelihood of adopting a state takeover reform. This finding supports their "divided localism" hypothesis that takeover reforms may represent

a way for states with centralized control to impose greater fiscal accountability on failing schools. Since the formation of P-16 councils may have fewer financial implications than these types of policies, the variable for the share of K-12 revenues from state sources may not be as relevant. Currently, there is a lack of data for statewide indicators of non-financial centralization in K-12 education governance, so this represents an important area for future research.

The second organizational structures variable for the presence of a *consolidated governing board* in higher education also fails to reach statistical significance in any of the models in this analysis. It was originally hypothesized that these more centralized postsecondary governance structures would increase the likelihood of forming a P-16 council since there may be fewer competing influences from different sources of authority, as well as greater resource availability to experiment with policy innovations. However, there is also some evidence in the education governance literature to suggest that educators may be able to exert greater influence on more centralized postsecondary governance structures. According to Toma (1986), centralized boards have a cost advantage in implementing and monitoring policies that are the same across institutions, which results in less differentiation within the state's postsecondary system. As a result, consumers have fewer choices available to signal their policy preferences, so taxpayers and students tend to have less of an influence on higher education decision making. In addition, Nicholson-Crotty and Meier (2003) have proposed that consolidated governing boards have the greatest autonomy among the different types of postsecondary governance structures, which may make them more insulated from politics in certain policy areas. If these researchers are correct in their assumption that educators may have

a greater influence in policy outcomes in consolidated governing boards, then the lack of effect from the consolidated governing board variable may be attributed to the mixed opinions about P-16 reform from the postsecondary sector. In Georgia, much of the leadership for the state's P-16 council came from the Board of Regents, which wanted the K-12 sector to improve the preparation of students entering higher education (Turner, Jones, & Hearn, 2004; Venezia et al., 2005). The council's work has even been described by some in the state's K-12 community as "a veiled attempt for higher education to control K-12" (Venezia, Callan, Kirst, & Usdan, 2006, p. 19). However, in other states there has been reluctance on behalf of the postsecondary sector to become too involved in P-16 reform amid concerns of a movement toward "No College Student Left Behind." College faculty have academic freedom guaranteed by tenure, which provides them with greater autonomy than K-12 teachers over what they teach and the instructional materials they use (Greenberg, 1991). Consequently, educators in the postsecondary sector may also be trying to influence the postsecondary governance boards to limit interactions with the K-12 system in an attempt to maintain their autonomy.

The next set of non-significant findings from this analysis relate to the role of leadership influences in the formation of P-16 councils. Although the presence of an "education governor" was found to increase the likelihood of forming a mandatory P-16 council, none of the other gubernatorial characteristics (or their interactions with the "education governor" variable) reached statistical significance in any of the models. As a result, the analysis is unfortunately unable to answer the question regarding under what conditions governors might be most influential in decision making for these types of policy initiatives. Two of these non-significant variables, the *governor's educational*

appointment powers and *governor's personal powers*, may be more important for understanding whether P-16 councils are effective at achieving the governor's goals for education than whether a state initially decides to form a P-16 council. In the hypotheses section, greater gubernatorial power to appoint members of the state board of education and the postsecondary governing board was predicted to increase the likelihood of forming a P-16 council, since the interests of the governor may be more closely aligned with other units in the network. The personal powers of the governor were also predicted to increase the likelihood of forming a P-16 council, as high values may indicate greater broad-based support for the governor's initiatives among the public and the legislature. However in many states, constitutional or statutory authority allows governors to bypass the legislative process and introduce new policies through executive orders. The use of executive orders has increased considerably since the 1980s, and is commonly used to reorganize state agencies or create new commissions (Rosenthal, 1990). Thus a governor could issue an executive order to form a P-16 council even if state agencies, legislators, or the general public did not support this initiative. Network theory suggests that leaders must develop trfust among other members in order to effectively promote their priorities (Milward & Provan, 2000; O'Toole & Meier, 2000), but it is possible that governors lacking support from these important constituents may be able to form weak P-16 networks by simply using their powers of office.

The third non-significant leadership influence is the variable representing the *governor's leadership in professional networks*. The original hypothesis proposed that states will be more likely to form P-16 councils if the governor has a leadership role in the professional network of the National Governor's Association. Since the NGA has

played an important role in distributing policy information about P-16 issues, governors that are most actively involved in this organization may be more likely to develop the tacit and explicit knowledge needed to implement reforms such as P-16 councils. This hypothesis attempts to account for the national diffusion of information about P-16 councils, since professional associations have been recognized as one of the most important outlets for the spread of successful policy ideas (Karch, 2007; McNeal et al., 2003). However, there are two primary limitations to using this variable to test for national diffusion influences. First, governors in all 50 states belong to the NGA so even those governors that did not serve on the executive committee have access to much of the same information. Second, information about P-16 councils may also spread nationally from a number of other sources (e.g. national news media, informal communication with policymakers in other states, or other professional associations like the Education Commission of the States) which have not been accounted for in this analysis. Only one other study has previously included a variable for state leadership in the National Governor's Association and the National Council of State Legislatures in an analysis of state policy innovation, and the variable had a very small effect that was only significant within a 90% confidence interval (McNeal, Tolbert, Mossberger, & Dotterweich, 2003). These authors also concede that "the admittedly rough measure of professional state networks may account for the lack of statistically significant relationship in the models" (p. 62). Despite the limitations of this type of variable, its inclusion in empirical analyses of state policy innovation still represents an important step toward attempting to understand the national spread of policy ideas. Nevertheless, the development of

additional indicators to capture national diffusion influences remains an important area for future research.

The presence of a *gubernatorial election year* is the last leadership influence without a significant effect on the likelihood of forming a P-16 council.[19] The original hypothesis posited that states will be more likely to form P-16 councils in an election year, since governors may find these councils to be useful for supporting their overall education agendas as they campaign for re-election. Although electoral cycles have been found to influence the adoption of other state education policy innovations (Mintrom & Vergari, 1998; Rincke, 2004; Wong & Shen, 2002), they may not be as relevant in the context of P-16 council formation. One could speculate that the formation of P-16 councils may be useful for different reasons at the various stages of the governor's term. For example, some governors may choose to form a P-16 council during their first year in office so that they have the organizational infrastructure in place from the start to help accomplish their P-16 educational objectives. Other governors may use the first year of their term to concentrate on educational issues they may have avoided prior to an election (e.g. controversial initiatives such as school choice), while waiting to address less politically-charged issue such as P-16 councils in the second or third year. Or governors may wait until the last year of their term to initiate a P-16 council as a way of preparing a new educational agenda for re-election. In light of this reasoning, the exact year in which a P-16 council is formed may depend more on the other types of educational initiatives the governor would like to pursue during different stages of his or her term than electoral cycles.

[19] A continuous variable for the number of years until the next gubernatorial election was also substituted in the analysis for the dichotomous variable representing an election year, and the results remained virtually unchanged.

Lastly, there is no significant effect from the environmental characteristic of states representing the *percentage of jobs requiring a bachelor's degree or higher*. The initial hypothesis was that a high percentage of jobs requiring a college degree would increase the likelihood of forming a P-16 council since there would be greater demand from the business community for initiatives designed to support a more highly educated workforce. Based on the findings from descriptive studies of P-16 collaboration (e.g. Bowler, 2001; Callan et al., 2006; Rochford, 2007; Venezia et al., 2005), it still seems highly likely that the business community has played an important role in promoting P-16 councils in many states. However, there are several limitations with the variable used in this analysis that likely contributed to the non-significant finding in this study. First, the demand from the business community for college-educated workers may not be accurately accounted for by only examining the composition of jobs in the state. Some states have a comparative advantage in attracting more college-educated workers than they produce (Bound, Groen, Kezdi, & Turner, 2001), so they may not face as much pressure to improve the transitions within the state's own educational system. Second, a low percentage of jobs requiring at least a BA may actually increase the demand for a P-16 council if there are complaints from the business community about the lack of qualified workers. Just as states with advanced economies may benefit from having a P-16 council to continue to meet the needs of the workforce, states with less developed economies may benefit from having a P-16 council to improve the workforce and attract new employers to the state. Third, the role of the business community is difficult to measure empirically and the current analysis cannot account for the effect of a few very influential business leaders. For example, in Ohio the former chair of Proctor and Gamble

joined together with several other important business and civic leaders to discuss concerns about their local school district (Rochford, 2007). These leaders formed a new organization, known as The Education Enhancement Partnership (TEEP), to identify the role of schools in meeting the changing needs of businesses in the county. Their efforts led to the creation of a regional P-16 compact that caught the attention of state policymakers, and eventually influenced the development of a statewide P-16 council. Since the current analysis does not account for these types of influences from important business leaders, the true impact of the business community remains unknown.

CHAPTER VI

CONCLUSION

The final chapter will begin by reviewing the purposes and development of this study. Second, the findings will be discussed in the context of the implications for theory. This section will extend beyond answering the research questions posed in this study by examining what the findings contribute to the broader body of literature in regards to how leadership influences and environmental characteristics may affect the state policy innovation process in the formation of network organizations. Next, the implications for future research will be presented, followed by study limitations. This chapter will conclude with a summary of the substantive, analytical and conceptual contributions of the study.

Review of the Study

The motivation for this study began with a desire to gain a better understanding of the spread of statewide P-16 councils, an important reform innovation in the P-16 education arena, which seeks to improve educational transitions and unify policies between K-12 and higher education systems. The presence of separate educational systems in the American states is a remnant of an era when only a small minority of students received a college education. Yet today, as the majority of students now seek to obtain some form of postsecondary education, the lack of collaboration between the two sectors has been associated with numerous problems related to college access and

preparation. Despite the problems posed by more traditional organizational arrangements, states have faced political, structural, and cultural barriers to creating more unified educational systems. While 31 states have been able to overcome these obstacles to create some form of statewide P-16 council, the remaining states continue to operate within an organizational divide between the two sectors. Although other studies have described the development of P-16 councils in individual states (e.g. Bowler, 2001; Kettlewell, Kaste, & Jones, 2000; Venezia et al., 2005), this one is the first to systematically examine the factors that have facilitated or hindered the spread of this important P-16 initiative throughout the American states.

In this study, P-16 councils were conceptualized as network organizations consisting of both horizontal and vertical interactions among many diverse members involved in an effort to collaborate on problems that neither the K-12 nor higher education sector could solve alone. Network theory was proposed as an overarching framework for understanding the types of influences which may be most likely to affect a state's decision of whether to form one of these innovative educational networks. Using this central organizing theory, three sets of hypotheses were distilled relating to the organizational structures, leadership influences, and environmental characteristics of states. These hypotheses were supported by other findings in the literature on comparative state politics, state policy adoption in education, and educational governance; and then tested empirically through the use of event history analysis.

The multivariate models indicated that there were no significant effects of a state's organizational structures on the likelihood of forming a P-16 council. However, network theory suggests that the structure of organizations is critical for developing

structural embeddedness in the formation of network organizations, so it is unlikely that the level of centralization within the state's K-12 and postsecondary governance structures do not matter. Instead, it seems more probable that there are limitations with the operationalization of key independent variables or the small sample size, which may result in a failure to account for the true influence of organizational structures in this analysis. Both leadership influences and environmental conditions were found to have a significant effect on a state's decisions regarding whether to form a P-16 council and the type of P-16 council that is formed. The condition of weak educational climates, as indicated by a low chance for college by age 19, was associated with a significant increase in the likelihood of forming all types of P-16 councils. Among the leadership influences of states, the presence of an "education governor" was particularly important for understanding the spread of mandatory statewide P-16 councils. Interestingly, gubernatorial leadership appeared to have no impact on the likelihood of creating more informal P-16 councils, where economic and demographic characteristics of states were better predictors of policy adoption. As the next section will discuss, these findings may have important theoretical implications that extend beyond the contexts of state formation of P-16 councils and educational policy innovation.

Theoretical Implications

Perhaps the most important theoretical implications from this study arise from the role of leadership influences on the policy adoption process by the government's chief executive officer. For more than a half century, the question of "who rules and why" (Lowi, 1964, p. 677) has been addressed in classical works by scholars such as David

Truman (1951), Floyd Hunter (1953), C. Wright Mills (1956), and Robert Dahl (1961). These early studies generated considerable debate over whether society is governed by a "power elite" consisting of a few political, business, and social leaders; or whether different viewpoints are represented by interest groups who act on behalf of individuals in a pluralistic society. In 1964, Theodore Lowi expanded the scope of the debate by suggesting that the power structure within the American political system depends upon the context of the policies under consideration. According to Lowi, "a political relationship is determined by the type of policy at stake, so that for every type of policy there is likely to be a distinctive type of political relationship" (p. 688). He proposed that the majority of public policies could be categorized as distributive, regulatory, or redistributive in nature. While the first two groups of distributive and regulatory policies are most likely to be influenced by the legislature or other agencies, the locus of decision making for redistributive policies is most likely to reside with top executives. Redistributive policies, such as welfare programs, involve shifting benefits from one group in society to another. These types of policies will always be more popular with the group that stands to benefit from the services than among those who provide the resources to support them. As a result, an executive is needed to carefully balance the interests of both sides to ensure that the outcome is fair. Elected officials in the executive's office are particularly influential in these types of policy decisions because they are directly accountable to a broad range of constituents, which makes them relatively impartial adjudicators.

Although Lowi's classic typology of public policies has been slightly modified over time, other researchers have generally found evidence to support the presence of

different power structures among distributive, regulatory, and redistributive policies (e.g. Ambrosius, 1989; Spitzer, 1983). However, this is not the only policy classification scheme that can be used to understand differences in various leadership influences on policy outcomes. One alternative approach involves placing policies on a continuum ranging from low to high on the two dimensions of saliency and technical complexity. Saliency refers to the relevance and amount of attention that the public pays to an issue; while technical complexity indicates the amount of information and level of effort required to understand an issue. Issues with high complexity and low public salience (i.e. regulations for financial securities) have large transaction costs for individual involvement; so technocrats, bureaucrats, or special interest groups tend to have the greatest role in influencing policy outcomes. Recently, these distinctions in saliency and complexity have been identified as useful for understanding the influence of various groups in state adoption of morality policies which seek to regulate social norms. For example, Haider-Markel and Meier (1996) found that policies to prohibit discrimination on the basis of sexual orientation were more likely to be explained by citizen values and partisanship of elected officials if the issue gained public salience through the election process. However, if the scope of the conflict was limited and the issue had low saliency, the values of the political elite and special interest groups were more likely to affect policy outcomes. The authors conclude that defining the scope of the conflict for a policy issue is helpful for identifying the advantages that some groups have over others in the policy adoption process.

Power Structures within Network Organizations

The findings from the present study have important implications for understanding power structures within a new type of policy context: network organizations. Government involvement in network organizations has greatly increased during the past decade (Goldsmith & Eggers, 2004), while expanding into a wide array of public services ranging from economic development (Arganoff & McGuire, 1998) to health care and social services (Milward & Provan, 1998; Provan & Milward, 1991). This trend has been described using the metaphor of a "hollow state," which "refers to any situation in which a government agency relies on others (private firms, non-profit organizations, or other government agencies) to work together to deliver public services" (Milward & Provan, 2000, p. 241). However, the majority of the research in this area examines the effects of network structures on policy outcomes, while relatively little remains known about the sources of leadership involved in initiating these types of organizational structures. In this study, the presence of an "education governor" was one of the primary factors associated with an increase in the likelihood of forming a state-mandated P-16 council. After applying the framework of network theory, it appears that governors may have a similar influence in the creation of other types of government networks. Although it may seem almost inevitable that governors would have an important influence in most areas of state policymaking, Barrilleaux and Berkman (2003) observe that the political science literature has presented mixed evidence with the role of governors ranging from "extremely influential" to "inconsequential." Most of the studies that have previously examined the role of the governor have focused on the state budget process, while research on the role of the governor in influencing state policymaking is

limited (Fording, Woods, & Prince, 2002; Gross, 1991). So why may it be reasonable to speculate that gubernatorial influence will be an important predictor in the broader context of state government networks? The framework from network theory provides at least four rationales for why governors might matter in the initiation of government network organizations.

Rationale 1: Networks require participation from a variety of different participants, so governors may have an advantage in bringing these potential network members together since they are responsible for interacting with and responding to numerous different groups throughout the state.

Government networks commonly consist of different levels of government (e.g. federal, state and local), but may also include a number of different public and private organizations with a stake in the local economy or public services (Arganoff & McGuire, 1998). The relationship among these participants tends to be loosely coupled, and members may not be directly aware of their interdependence with other units (O'Toole & Meier, 2000). These participants also tend to be preoccupied with the complexity of maintaining their standard operations, so an external leader with access to each of these different groups is critical for forming a network. The governor may be one of the few actors in the state policymaking environment that has this type of access. He or she has the opportunity for a wide range of interactions with different groups through activities such as working with state agencies to develop budgets, appointing as many as hundreds of members of boards and commissions, awarding contracts, dealing with constituent services, administering state programs, making speeches, and attending meetings on key

policy issues (Bernick & Wiggins, 1991; Beyle, 2004; Rosenthal, 1990). As a result, governors are able to see the big picture surrounding a policy area and have established relationships with many of the members that would be needed to form a new government network organization. Even though other elected officials may engage in similar types of activities, they may not be involved with as many of the different groups needed for a statewide network organization. For example, Goldsmith and Eggers (2004) found that legislators are often resistant to networks if there is more than one legislative committee that oversees a particular policy area.

Rationale 2: Networks require all members to be committed to a common goal. Governors are accountable to a broad-base of constituents and can help to ensure that all members of a network are working in the interests of the public good.

Goal congruence is one of the greatest challenges for networks since organizations may have different missions that are not aligned, and outcomes can be unclear (Goldsmith & Eggers, 2004). The interests of governors may be mostly closely aligned with the public interests that state agencies are designed to serve. The electorate for governors consists of voters throughout the entire state, which differs from legislators who are elected within individual districts. As Rosenthal (1990, p. 52) notes, "this difference in representation leads to differences in policy positions, since constituency opinion may be out of line with state opinion and district interests may not be identical with statewide interests." Since there is only one governor in each state, these leaders also have greater personal responsibility for balancing the needs of the state as a whole and tend to be held personally accountable for state outcomes. Governors may also have

an advantage in keeping other network members accountable for the same goals through their ability to use laws, funding structures, or a shared system of penalties and rewards to stabilize the behavior of different groups (Goldsmith & Eggers, 2004; Milward & Provan, 2000).

Rationale 3: There are several different ways to initiate networks, and governors tend to have the resources and power necessary to utilize any of these methods.

Goldsmith and Eggers (2004) have identified five ways in which networks can be initiated, and governors commonly have access to all of these options, which may make it easier for them to form new government networks. First, although it is uncommon, members of a network can be brought together with money. Governors in many states are responsible for proposing the initial state budget so they may be able to negotiate some funding to provide incentives for involvement in network organizations. Second, networks can be initiated through rhetoric such as speeches by elected officials or campaigns to increase public awareness of the need for greater collaboration. As Beyle (2004) has observed, the media is a significant source of informal power that is available to governors. These leaders garner substantial attention from the media and also have considerable control in planning when press conferences are held or news releases are distributed. Third, networks can be formed by providing members with the capacity to convene through resources such as "land use authority" that provides space to bring people together. Organizations often lack the time and resources to organize a network even though they may be willing participants. Governors can make arrangements that may make it easier for state agencies to meet with external groups. Fourth, hiring people

or creating new technology to bring people together can facilitate the formation of network organizations. Governors may be able to authorize the hiring of new personnel, or provide resources such as technology to increase opportunities for collaboration among network members. Fifth, government authority can be used to call on groups to come together to provide certain services or create formal recognition for network organizations. As noted earlier, governors in many states are able to issue executive orders, which can be used to require network members to work together, regardless of whether they want to or not (Rosenthal, 1990). Governors may also work with the legislature to pass new statutes which may provide networks with even greater legitimacy and possibly even some authoritative powers of their own.

Rationale 4: The formation of new networks requires explicit and tacit knowledge, which governors may readily develop from their experience in the policy arena.

The ability to create a network requires professional/ technical knowledge, as well as experience in negotiating and collaborating with external organizations (Goldsmith & Eggers, 2004). Among the professional and technical knowledge needed, explicit information about facts and operating procedures are important for understanding how different members can most effectively work together. Governors' experiences working across different state agencies may help them to recognize the strengths and weaknesses of various members, and also identify any common problems or concerns that need to be overcome. The tacit knowledge needed for network management may include "negotiation, mediation, risk analysis, trust building, collaboration, and project management" (Goldsmith & Eggers, 2004, p. 158). These are the types of skills that

governors are likely to develop through their own experiences in the policy arena as they seek to meet the needs of a broad range of constituents. Yet even though network leaders must be cooperative rather than adversarial, they still need to be seen as powerful and authoritative, too (Jones, Hesterly, & Borgatti, 1997). The governor's role in management is different from that of a CEO in the private sector, since authority is more decentralized in the provision of government services due to the presence of multiple actors with considerable autonomy (Cox, 1991). Yet governors are still the most central actor in the hierarchy of state policymaking, and also the most visible, which may help them to provide successful leadership for initiating network organizations.

Overall, there does appear to be a theoretical basis for assuming that governors may have an important influence in the formation of government networks, which may extend beyond the context of the present analysis. This has yet to be tested empirically, but may be most applicable in policy areas that tend to receive considerable attention on behalf of governors. For example, Fording, Woods and Prince (2002) found that governors tend to introduce the most policy proposals in areas such as education, health care, and criminal justice; and the fewest for issues like environmental policy and civil rights. Even though governors may have the ability to form new government networks, they may not have the personal initiative to undertake these efforts in policy areas that are low on their list of priorities. This suggests that policy networks for health care or criminal justice may be best-suited for future research on the influence of governors in forming new government network organizations.

In addition, there is a need for more research to understand the ways in which governors operate within government networks. Previous studies have found that the

scope of the agenda for the executive leader of the government is negatively associated with success in the legislative arena and the leader's effectiveness (Barth & Ferguson, 2002; Bond & Fleisher, 1990; Ferguson, 2003). Similarly in this study, states were less likely to form a mandatory P-16 council if the governor had not devoted a large share of his or her agenda to education issues. The lack of significance from many of the environmental characteristics in this model also implies that governors' involvement in initiating these types of reforms tends to reflect their priorities for improving education more than strategic responses on behalf of state leaders to respond to environmental pressures. Nevertheless, there was no significant effect from any of the interaction terms between the "education governor" variable and the other gubernatorial leadership characteristics to explain *how* these governors are able to effectively persuade the state to adopt these organizational structures if they have an interest in improving the policy area.

Future studies may want to consider how other aspects of governors and institutional characteristics of state governments may affect the governor's ability to influence policy outcomes for government networks. Based on the findings from previous research, important aspects of governors may include personal characteristics, such as motivations for behavior, and institutional factors including the resources available to the executive's office. Among the characteristics of state governments, partisanship and legislative professionalism may have a significant influence on gubernatorial effectiveness. Each of these factors will be discussed in further detail below.

Personal motivations. In addition to a governor's priorities for a particular policy area, the motivation for achieving these priorities may also affect the governor's ability to influence policy. Barth and Ferguson (2002) conducted a content analysis of governors'

inaugural addresses and coded the motivation behind the politicians' behavior based on achievement, intimacy, and power motives. They found that the presence of a "power motive,"[20] based on concerns about the state's reputation and prestige over others, was associated with both higher public approval ratings and an increase in likelihood of the governor passing items on his or her legislative agenda. The authors suggest that this may reflect the public's desire for a governor that can stand up and defend the state. Based on these findings, it seems that governors who frame the issue of networks as a way of improving the state's national ranking in a policy area may also be most effective at initiating new government networks.

Resources available to the executive's office. Across the fifty states, there is tremendous variation in the size of the governor's staff and other resources available to the executive's office. As Beyle (1988, p. 137) has observed, "more staff means more flexibility and support for the governor in the many roles he or she must fulfill, or, to the cynic, more positions for patronage appointments and greater chance for confusion." There is also empirical evidence in the comparative state politics literature to suggest that governors with a larger staff and greater resources tend to be more effective at achieving their priorities. For example, Ferguson (2003) found a positive effect of staff size on the likelihood that a bill from the governor's agenda would pass in the state legislature. In addition, a study by Dilger, Krause and Moffet (1995) indicated that governors with strong institutional powers tend to receive higher effectiveness ratings when they possess greater "enabling resources," such as the number of gubernatorial staff and gubernatorial fiscal support for state government employees. Similarly, governors with greater

[20] The following is an example of a sentence coded by the authors as a power motive: "Cooperation and mutual respect will give us a fighting chance to take a national leadership role in providing quality healthcare for all people" (p. 279).

resources in the executive office may be able to gather more information about policy innovations and have access to more support for implementing new government networks.

Partisanship within the legislature. The governor's success in the policy arena may also depend on whether legislators have similar policy orientations. Legislators tend to be more supportive of the governor's agenda if they are from the same political party, particularly in an election year when legislators may try to ride on the coattails of the governor's success (Gross, 1991; Hall, 2002). The governor also tends to have a stronger coalition within the legislature if the state's political party endorses the gubernatorial nomination (Morehouse, 1996). In states where there is divided partisan control of the government, there is some evidence that proposals from the governor may be less likely to pass in the legislature (Ferguson, 2003; Rosenthal, 1990). This may occur because there are more potential sources of partisan conflict in a divided government, so the governor must engage in greater bargaining rather than pursuing his or her own interests. There may also be more competing influences from sources such as the leaders of the House and Senate or committee chairs. However, other studies have found little to no significant effect of divided government on gubernatorial success in the legislature, especially among low conflict policy areas that pose few partisan and ideological challenges (Bowling & Ferguson, 2001; Morehouse, 1996; Van Assendelft, 1997). This suggests that governors may work to achieve greater bipartisan support during times of divided government, or may generate more public support to pressure legislators in order to achieve their initiatives. Since government networks appear to be a relatively low conflict area, divided government is unlikely to create a gridlock due to ideological

differences about these types of organizational structures. However, divided government may reduce the amount of time available to governors for actively initiating new network structures if they must devote more of their attention to building coalitions among different legislative and constituent groups.

Legislative professionalism. Legislative professionalism may also affect the governor's ability to influence policy outcomes, but the direction of the effect on the formation of government networks is unknown. Legislative professionalism takes into account a state's legislative session length, member pay and the availability of staff resources relative to the U.S. Congress (Squire & Hamm, 2005). Traditionally, legislative professionalism has been associated with greater policy innovation (e.g. Ferguson, 2003; McNeal et al., 2003; Shipan & Volden, 2006). More professional legislatures spend more time in session, which tends to result in a larger volume of bills with greater rates of passage. Higher member pay allows legislators to adopt legislative careers and devote more time to constituent concerns and the investigation of policy options. In addition, the availability of greater staff resources provides the legislature with more information on new policy innovations and research to support policymaking decisions. Yet, researchers have also observed that legislative professionalism may decrease gubernatorial effectiveness and influence in the policy arena (Barrilleaux & Berkman, 2003; Gross, 1991; Rosenthal, 1990). In more professional legislatures, members may have more time and resources to be involved in policymaking, so there tends to be less reliance on leadership from the governor's office. Legislative professionalism may also reduce administrator contact with the governor's office (Dometrius, 2002). Legislators have an interest in following the budgets and activities of agencies that serve their constituents. In

citizen legislatures, members spend more time away from the state capital so there is greater reliance on the governor to monitor state agencies. Thus, governors in states with low levels of legislative professionalism could have an advantage in developing structural embeddedness within state agencies, which may facilitate government network formation.

Internal Determinants

Finally, this study presents important theoretical implications for understanding how the environmental conditions of states may influence the formation of network organizations. Similar to other studies of state policy innovation (e.g. Berry & Berry, 1990; Soss et al., 2001), internal determinants are among the best predictors of P-16 council formations, particularly among the more informal types of these organizational structures. In the context of network formations, one important role of the surrounding environment may be to raise awareness of the need for change (O'Toole & Meier, 2000). As Kirst, Meister, and Rowley (1984) propose, early influences on policy networks often come from public opinion and the media. Many issues are able to quickly gain salience among state policymakers in times of conflict or public dissatisfaction. This appears to be the case in the present analysis, as low levels of college continuation rates are associated with an increase in the likelihood of forming both informal and mandatory P-16 councils. It would also be interesting to test whether problems in the surrounding policy environment influence the formation of other types of government networks.

Research Implications

The potential for research examining the applicability of the *theoretical* implications from this study to other contexts was discussed in the previous section. Yet this study also has important implications for future research which would contribute to the *substantive* knowledge of P-16 councils in the education literature since relatively little remains known about this important policy area. First, this analysis could be revisited at a later date after more states have formed P-16 councils. There are currently 19 states without any form of P-16 organizational structure, and 29 states without a mandatory P-16 council. Both voluntary and mandatory P-16 councils have grown in popularity in recent years, and it is likely that many of these remaining states will eventually form their own P-16 councils. For some of the independent variables that were insignificant in this analysis, a small effect may be identified once there is more variation in the dependent variable. Interactions with time could also be included to test whether the effects of any state characteristics increase or diminish in magnitude during the later years of the policy adoption process. For example, is the presence of an "education governor" more important in predicting the formation of mandatory P-16 councils during the early years when little is known about P-16 reform? In addition, an event history model for repeated events could be used to examine how the risk process changes after accounting for states in which early P-16 councils have ceased operations and decisions must be made regarding whether to form another P-16 council at a later date.

Second, this analysis could be extended to examine which factors influence the various types of activities that are pursued by P-16 councils in different states. Even though all P-16 councils seek to improve the transition from K-12 to higher education,

there is tremendous variation in the types of policy levers that are used to achieve this goal (Callan et al., 2006). Political characteristics of states, such as ideology and partisanship, might be particularly important for understanding these types of differences. For example, the P-16 councils in some states have played an important role in designing and implementing pre-college outreach or early intervention programs for students in underrepresented racial and socioeconomic groups. There is some evidence that Democrats tend to be more concerned about inequality of opportunities for higher education than Republicans (Doyle, 2007), so P-16 councils may be more likely to pursue these types of initiatives when there is Democratic control of the state government or legislature. In other states, P-16 councils are more involved in initiatives to improve accountability for education transition indicators. Since Republican presence in the legislature has been associated with state adoption of other accountability initiatives such as postsecondary performing funding policies (McLendon, Hearn, & Deaton, 2006), it may also increase the probability that a state's P-16 council would focus on accountability-related policies. In order to conduct this type of analysis, multinomial logistic regression could be used to examine which factors influence the likelihood that a P-16 council will promote certain educational policy initiatives. Since the types of policy levers pursued by P-16 councils tend to change over time, the data for the dependent variable would require a survey of members from the P-16 councils in all states in order to identify the specific activities that were undertaken during each year.

Third, even though this study focused on the antecedents to state formation of P-16 councils, the effect of P-16 councils on state policy and student outcomes remains an important unanswered question. As discussed earlier, P-16 councils often have little

authority and financial support from the state (e.g. Callan et al., 2006; Venezia et al., 2005), so it is unclear whether they have been successful at implementing meaningful changes in educational policy and improving the transition between K-12 and higher education. It would also be interesting to test whether there are any differences in effectiveness between informal P-16 councils formed by voluntary collaborations and mandatory P-16 councils which require greater participation and may receive more support from the state government. These types of questions might best be addressed by using causal inference techniques, such as difference-in-differences, to compare changes over time in student outcomes depending on whether a P-16 council was present. The significant findings from the current study could be used to help identify a comparison group of similar states in order to determine whether any differences in student outcomes are attributable to the adoption of a P-16 council.

Study Limitations

One of the primary limitations of this study relates to the operationalization of the dependent variable. There is no commonly accepted definition of P-16 councils that could be used to classify the organizational structures in each state. Although every effort was made to establish criteria that would identify meaningful P-16 councils, the definition used in this analysis remains subjective. As a result, too many or too few states may have been identified as having a P-16 council. For example, an argument could be made that executive orders establishing temporary P-16 councils should be included in the analysis despite the failure of these organizations to meet the criteria for duration. Or perhaps mandatory P-16 councils should only be eligible if the state provides them with

authoritative powers or financial appropriations to ensure that the purpose of these organizations is more than merely symbolic. The results from this analysis would likely be altered if a different definition of P-16 councils was used.

Another problem with defining P-16 councils is that event history analysis requires a binary dependent variable with a value of 1 if the event occurred or 0 if the event did not occur in a specific time period for at-risk states. The use of a binary dependent variable assumes that all events are identical. Yet as previously noted, there is considerable variation in the characteristics of P-16 councils across the fifty states. Part of this concern is addressed by the use of two different dependent variables; one that includes the year of formation of the first P-16 council in each state regardless of type, and another that only includes mandatory P-16 councils formed by executive orders of the governor or legislative statutes. The first dependent variable may be justified because all P-16 councils serve similar purposes and involve many of the same actors, thus they are representing the same type of policy decision on behalf of states. The second dependent variable more specifically examines government mandated councils that require broader participation and may also receive greater support (and possibly funding) from the state government, which may make them more powerful than P-16 councils established through voluntary collaboration. This distinction may also be important for understanding differences in the types of leaderships influences present in the policy adoption process, since support of elected officials is needed to mandate a P-16 council. Although there may be other variations in the characteristics of P-16 councils that may be interesting to examine separately, the differences in how the P-16 councils were formed

is one of the most important distinctions for this analysis of the antecedents to state policy adoption.

Lastly, the influence of leadership is limited to the role of the governor in this analysis. In a study on state adoption of school choice policies, Michael Mintrom (1997) was able to conduct a series of interviews with policymakers in the fifty states to identify a wide range of "policy entrepreneurs" including state legislators, governors, business interests, and members of the teaching profession. However, it would be difficult to collect similar information for this analysis because the first P-16 council was formed over 15 years ago and policymakers familiar with the process are likely to have moved on to other positions or forgotten information about this event. As a result, this study focuses more narrowly on the role of governors to understand more about one of the most important education policy leaders in the state. The governor is one of the few leaders with access to the many diverse participants needed to form a P-16 council, so it seems particularly relevant to analyze the role of gubernatorial leadership in this study.

Summary of the Contributions of this Study

Overall, this study has sought to make important contributions substantively, analytically, and conceptually. *Substantively*, this analysis has improved our understanding of the organizational structures, leadership influences, and environmental conditions of the policy landscape that facilitate or impede P-16 collaboration in the American states. This addresses an important gap in the education literature, as there is a lack of empirical research on P-16 education despite the growing importance of this field (Kirst, 2005; McLendon & Heller, 2003).

Analytically, this study has made a contribution through the compilation of many diverse sources of data; among which one particularly important development is the creation of a new measurable indicator for the presence of "education governors." This term has been used descriptively for governors that have played an important role in promoting a specific education policy, but this is the first study to empirically test the effect of governors' priorities in educational reform initiatives. The findings indicate that there really is such a thing as an "education governor" that devotes a large percentage of his or her agenda to promoting a variety of education initiatives, and that the presence of this type of leader increases the likelihood of fostering innovative educational policies such as mandatory P-16 councils. This data may be particularly valuable for future studies which seek to understand the influence of governors in promoting other types of educational initiatives, especially in areas that governors tend to address directly in their state-of-the-state speeches such as teacher compensation or accountability reforms.

Conceptually, this study has contributed to our knowledge of educational organization and governance through the use of network theory. Although network theory has previously been used in the field of education to explain differences in student achievement outcomes (Manna, 2006; Meier & O'Toole, 2000), this study is the first to use network theory to empirically test hypotheses supporting the emergence of educational reforms. The findings from this study also have broader theoretical implications for understanding who governs in the formation of network organizations. Government networks represent a relatively new type of policy context; one in which leadership from the executive's office may be particularly important for explaining the formation of these innovative organizational structures.

On a concluding note, it has recently been observed that, "K–16 reform cuts into the heart of major education issues and needs currently confronting this nation: the ability of students to complete K–12 and finish some form of postsecondary education, and the ability of states to provide students with a clear and consistent set of policies and programs….The responsibility for reform cannot be carried by one sector, but rather must be shared across systems to reach common ground, focusing on improving K–12 and postsecondary education for all students" (Venezia et al., 2005, p. xi). As P-16 councils continue to expand across the American states as a way of improving collaboration across educational sectors, it is important to have an understanding of the context and circumstances under which these changes are occurring. Taken as a whole, this study has improved the knowledge base of an important reform initiative in the P-16 education arena, while also addressing critical gaps in the broader literature and research relating to education governance, state policy innovation, and network theory.

Appendix A: Description of P-16 Councils by State

ALABAMA: 1 ineligible P-16 council

State	Alabama
Ineligible P-16 Council	In October of 2007, Governor Riley issued an executive order to reorganize the Department of Workforce Development. The executive order changed the membership of the department, and now includes the Chancellor of The Alabama College System, the Director of the Alabama Industrial Training Institute; and the State Superintendent of Education. However, the Department is designed to address issues of workforce development rather than P-16 education, so it does not meet the "function" criteria for this analysis.
Sources	Executive order: http://www.governorpress.alabama.gov/pr/ex-36-2007-10-05.asp

ALASKA: No eligible P-16 councils

ARIZONA: 1 eligible P-16 council (mandatory)

State	Arizona
Council Name	Governor's P-20 Council of Arizona
Establishment	Established by Executive Order No. 2005-19 on July 8, 2005. Modified by Executive Order no. 2005-26 on October 5, 2005.
Participation	Statewide
Levels of education	Pre-school, Kindergarten, K-12, community college, four-year universities, graduate education, workforce development
Education members	Members must include at least: Superintendent of Public Instruction or designee, member of the Arizona Board of Regents, Arizona's 3 state university presidents, 4 community college representatives, 2 superintendents of a joint technological education district, member of the state board of education, representative of a 4-year private postsecondary institution, representative engaged in HS dropout prevention programs or policy, a student representative, a tribal representative
Political members	Governor, 4 members of the state legislature (ex-officio), representative of the governor's council on innovation and technology, representative of the governor's council on workforce policy, representative of the governor's school readiness board, 2 locally elected officials.
Business and community members	Intel Corporation, Apple, Arizona Business & Education Coalition, International Commerce Institute, Greater Phoenix Urban League, Arizona Hispanic Chamber of Commerce, Helios, Arizona Chapter of the Associated General Contractors, General Dynamics C4 Systems, USAA, Greater Phoenix Leadership, 8 members of the public representing parent groups or business and industry

Duration	On-going
Involvement	The Council shall meet to conduct its affairs at least four times each year at various locations across the state.
Function: Role in state policy	Brings together state policymakers and educators in quarterly meetings. Presentations and reports affecting state policy are presented to the members.
Sources	Executive orders of the governor: http://azgovernor.gov/dms/upload/EO~100605~2005-26.pdf State website: http://www.azgovernor.gov/P20/ Membership roster: http://www.azgovernor.gov/P20/Members.asp Agendas: http://www.azgovernor.gov/P20/Agendas.asp

ARKANSAS: 2 eligible P-16 councils (voluntary and mandatory)

State	**Arkansas**
Council Name	The Arkansas P-16 Partnership (2001)
Establishment	Partnership: A P-16 coordinator was hired in January of 2001 to work with the state's P-16 Partnership Task Force and to facilitate the development of nine local P–16 councils.
Participation	Statewide
Levels of education	Preschool through graduate education
Education members	Arkansas Department of Higher Education, Arkansas Department of Education, Department of Workforce Education, Division of Child Care and Early Childhood Education, Department of Workforce Education, University of Arkansas at Monticello, University of Arkansas at Little Rock, University of Arkansas at Fayetteville University of Arkansas at Pine Bluff, East Arkansas Community College, Henderson State University, Pulaski Technical College, Arkansas State University, 1 teacher, 1 principal, 2 superintendents/ assistant superintendents, 1 literacy director
Political members	2 Representatives from the Office of the Governor
Business and community members	Arkansas Business & Education Alliance, New Futures
Duration	On-going
Involvement	Bi-monthly meetings of the education departments' deputy directors
Function: Role in state policy	Partnership: The P-16 Partnership will recommend, to the senior staff of the three state education agencies, a comprehensive five-year P-16 Plan for education in Arkansas.
Sources	State website: http://www.arkansashighered.com/p16.html Task force roster: http://www.arkansashighered.com/ATQE/P16taskforce.pdf

	Meeting minutes: http://www.arkansashighered.com/qmeet/2002_oct/MINUTES_JT_Mtg.pdf

State	**Arkansas**
Council Name	Arkansas Commission for the Coordination of Educational Efforts (2003)
Establishment	Established through the legislature with Act 109 from HB 1034 in the 2003 Second Extraordinary Session.
Participation	Statewide
Levels of education	Preschool through graduate education
Education members	Director of the Department of Higher Education, director of the Department of Education, director of the Department of Workforce Education, director of the Division of Child Care and early Childhood Education, University of Arkansas System, Arkansas Science and Technology Authority, 1 public school administrator, 1 public school teacher, 1 president or chancellor of a four-year university, 1 president or chancellor of a two-year college, 1 member of the board of trustees of a four-year university, one member of the board of trustees of a two-year college, 1 nominee submitted by the Executive Director of the Arkansas Education Association, 1 nominee submitted by the Executive Director of the Arkansas Association of Educational Administrators, 1 nominee submitted by the Executive Director of the Arkansas School Boards Association, 1 representative of a predominately black college or university
Political members	Commission: Governor or designee
Business and community members	Commission: Director of the Department of Economic Development, Executive Chief Information Officer
Duration	On-going
Involvement	Commission: The commission meets quarterly
Function: Role in state policy	The commission shall study and recommend policies related to the improvement of coordination among and between the levels of education from pre-kindergarten to the graduate level.
Sources	House Bill 2540: http://www.arkleg.state.ar.us/ftproot/bills/2005/public/HB2540.pdf Report: http://www.arkansashighered.com/qmeet/2005_apr/02-Director's%20Report.pdf Act 109: ftp://www.arkleg.state.ar.us/acts/2003s2/public/Act109.pdf

CALIFORNIA: 1 ineligible P-16 council and 1 eligible P-16 council (voluntary)

State	California
Ineligible P-16 Council	The Intersegmental Coordinating Committee (ICC) was established by the California Education Roundtable in 1987 to foster collaboration within California's educational community at all levels through conducting activities and supporting strategies that link the public schools, community colleges, and baccalaureate-granting colleges and universities. However, the ICC is ineligible as a P-16 council for the purposes of this analysis because it lacks participation from statewide agencies for K-12 education.
Sources	ICC website: http://www.certicc.org/abouticc.aspx ICC list: http://www.certicc.org/rosterByCommittee.aspx?commID=1 ICC 1989 report: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/20/5e/ff.pdf

State	California
Council Name	Superintendent's California P-16 Council (2004)
Establishment	Established by State Superintendent of Public Instruction Jack O'Connell on December 22, 2004
Participation	Statewide
Levels of education	Preschool, elementary, middle, high school, community college, four-year university
Education members	8 superintendents/ assistant superintendents, 3 principals, 6 teachers, 2 professors, 1 student, 2 representatives of private education organizations, 2 school board members, Vice Chancellor of California Community Colleges, 2 representatives from CSU Sacramento, 1 representative of San Diego State University, 1 representative of UC Davis, 1 representative of UC Berkeley, chancellor of UC Merced, Assistant Vice Chancellor of California State University, Provost of the University of California, 1 UC Regent, 2 members of the State Board of Education, Director of GEAR UP, 1 representative of the California State Parent Teacher Association, director of the California School Employees Association, executive director of the California School Boards Association, 1 charter school representative
Political members	Speaker of the California State Assembly, majority leader of California State Senate
Business and community members	Sacramento Metro Chamber of Commerce, Silicon Valley Leadership Group, IBM Corporation, Apple Computer, California Manufacturers and Technology Association, Washington Mutual, Bill & Melinda Gates Foundation, James Irvine Foundation, Stupski Foundation
Duration	On-going. All members of the Council attend plenary sessions and subcommittee meetings that are held between the plenary sessions.
Involvement	Schedule of meetings indicates 4 meetings per year for 2004, 2005, and 2006. There are additional sub-committee and regional P-16 council meetings throughout the year.
Function: Role	Brings together state policymakers and educators for meetings.

in state policy	Prepared report with recommendations for state policymakers. Subcommittee recommendations have been put forward as sponsored bills in the state legislature.
Sources	State website: http://www.cde.ca.gov/eo/in/pc/ Membership roster: http://www.cde.ca.gov/eo/in/pc/documents/yr06members120806.pdf Report: http://www.cde.ca.gov/eo/in/pc/hsreformrptrecomnd.asp Schedule: http://www.cde.ca.gov/eo/in/pc/p16mtgsgen.asp Meeting minutes: http://www.cde.ca.gov/eo/in/pc/p16mtgsgen.asp

COLORADO: 2 ineligible P-16 councils and 1 eligible P-16 council (mandatory)

State	**Colorado**
Ineligible P-16 Council	Colorado Partnership for Education Renewal (*CoPER)* is a 501(c)(3) non-profit organization that was established in 1986, but did not begin its P-16 education initiatives until Spring of 2005. The purpose of the organization is to "ensure that the voices of educators across the P-16 spectrum are heard by policy makers and other stake holders in the state as they develop legislation and policies that address the same concern." Members of CoPER's P-16 initiative include: representatives Colorado State University, University of Colorado at Boulder, University of Colorado at Denver, University of Northern Colorado, 5 school districts, and CoPER staff. However, CoPER does not meet the eligibility requirements for this analysis because it lacks statewide agency participation.
Sources	CoPER bylaws: http://www.coloradopartnership.org/gov_board/pop_bylaws.html CoPER annual report: http://www.coloradopartnership.org/reports/CoPERAnnRep2007.pdf CoPER P-16 report: http://www.coloradopartnership.org/reports/P-16view.pdf

State	**Colorado**
Ineligible P-16 Council	Colorado Education Alignment Council (*CEAC)* was established by executive orders B009-05 of Governor Bill Owens on October 4, 2005. The council was initiated to make recommendations for greater educational alignment to the Governor, State Board of Education, Colorado Commission on Higher Education, education committees of the Colorado General Assembly, governing boards of Colorado's public institutions of higher education, and local boards of education of Colorado's public K-12 schools. The executive order specified that the council would expire on October 2, 2006, so this organization fails to meet the eligibility requirement of duration.
Sources	CEAC Executive order:

	http://www.colorado.gov/governor/eos/b00905.pdf CEAC press release: http://www.colorado.gov/governor/press/october05/ceac.html

State	**Colorado**
Council Name	Governor's P-20 Education Coordinating Council (2007)
Establishment	The Governor's Council was created by Executive Order B 003 07 in April of 2007 by Governor Bill Ritter, Jr.
Participation	Statewide
Levels of education	Kindergarten, K-12, community colleges, four-year universities
Education members	President of Colorado State University at Pueblo (co-chair), Mile High Montessori, Metropolitan State College Board of Trustees, Kit Carson School District, Mesa Valley County 51 School District, Denver East High School, Cherry Creek School District, Littleton Public Schools, Denver Public Schools, Boulder Valley Schools, Colorado Education Association, Adams 12 School District, University of Colorado at Denver, Western State College, Community College of Aurora, Platt College, Colorado Department of Education, Colorado On-line Learning, Classical Academy, Colorado ACTE, Fort Lewis College, University of Colorado at Colorado Springs, Colorado Uplift, Colorado State University, University of Denver, North Conejos School District, University of North Colorado, University of Colorado at Boulder, State Department of Higher Education, State Department of Education, State Board of Education, Colorado Commission on Higher Education
Political members	Lt. Governor
Business and community members	Benson Mineral Group, Bonfils-Stanton Foundation
Duration	Ongoing
Involvement	The P-20 Council shall meet regularly at the discretion and direction of the Governor. Subcommittees formed by the P-20 Council shall determine their own meeting schedules.
Function: Role in state policy	The council shall make recommendations to the Governor regarding potential legislation, policies, and programs that will make progress toward implementing goals found in *Colorado Promise.*
Sources	Executive order: http://www.colorado.gov/governor/press/pdf/executive-orders/2007/ExecutiveOrder-GovernorP20.pdf Governor's council: http://www.colorado.gov/governor/p-20-council.html

CONNECTICUT: 1 ineligible P-16 council

State	Connecticut
Ineligible P-16 Council	Connecticut has a temporary Pk-16 council formed as a result of a two-year grant of the National Governor's Association. This council does not meet the requirement of duration for this analysis.
Sources	http://www.sde.ct.gov/sde/lib/sde/powerpointpresentations/curriculum/hs_redesign/ pk_16_1_10_2007.ppt#1_

DELAWARE: 1 eligible P-16 councils (mandatory)

State	Delaware
Council Name	Delaware P-20 Council
Establishment	The Delaware P-20 Council was established in 2003 by Governor Ruth Ann Minner's Executive Order 47 and placed in statute by Chapter 62, section 107 on June 28, 2005.
Participation	Statewide
Levels of education	Early childhood to post-secondary education
Education members	President of the University of Delaware, President of Delaware State University, President of Delaware Technical and Community College, President of Wesley College, President of Willington College, Chair of the Delaware Early Care and Education Council, President of the State Board of Education (co-chair), Secretary of Education (co-chair). Subcommittees shall include representatives of other persons and groups with critical interests in the outcome of the Council's work, including representatives of teachers, school administrators, local school boards, and parents.
Political members	Governor, Chair of the House of Representatives Education Committee, Chair of the Senate Education Committee
Business and community members	Chair of the Business Roundtable Education Committee, Executive Director of the Delaware State Chamber of Commerce
Duration	On-going
Involvement	The Council shall report semi-annually to the Governor on the status of its work. The website includes meeting minutes from 2-3 meetings per year.
Function: Role in state policy	The P-20 Council shall make recommendations designed to ensure a more integrated, seamless education system that enables children to enter school ready to learn, receive challenging instruction throughout their school careers, graduate from high school ready for college or work, and continue their education in a way that makes them productive and successful citizens.
Sources	State website: http://www.doe.state.de.us/info/p20council/ Governor's executive orders: http://governor.delaware.gov/orders/webexecorder47.shtml State statute:

	http://delcode.delaware.gov/sessionlaws/ga143/chp062.shtml

FLORIDA: 1 ineligible P-16 council and 1 eligible P-16 council (mandatory)

State	Florida
Ineligible P-16 Council	The Articulation Coordinating Committee (ACC) is a K-20 advisory body appointed by the Commissioner of Education. The ACC was established in the early 1970s as a forum for discussing and coordinating ways to help students move easily from institution to institution and from one level of education to the next. However, the ACC lacked participation from any statewide K-12 agencies so it fails to meet the membership criteria for this analysis.
Sources	State website: http://www.fldoe.org/articulation/ Membership & Agendas: http://www.fldoe.org/articulation/postacchome.asp Articulation manual: http://www.fldoe.org/articulation/pdf/statewide-postsecondary-articulation-manual.pdf

State	Florida
Council Name	Florida Board of Education (reorganized)
Establishment	The reorganization of the Florida Board of Education was passed by HB 2263 and approved by the governor on June 19, 2000 (chapter 2000-321)
Participation	Statewide
Levels of education	Kindergarten through graduate education
Education members	Commissioner of Education, Chancellor of K-12 Education, Chancellor of State Universities, Chancellor of Community Colleges and Career Preparation, Executive Director of Nonpublic and Nontraditional Education
Political members	None
Business and community members	Part-time citizen board consisting of seven members appointed by the Governor
Duration	On-going
Involvement	During the past five years, there have been 3 to 4 meetings each year.
Function: Role in state policy	The purpose of the board is to "achieve within existing resources true systemic change in education governance by establishing a seamless academic educational system that fosters an integrated continuum of kindergarten through graduate school education for Florida's citizens" The BOE has rule making authority and provides recommendations to the state legislature for new aligned education policies
Sources	Legislative statute: http://doe.dos.state.fl.us/laws/00laws/ch_2000-

	321.pdf Florida Board of Education website: http://www.flboe.org/

GEORGIA: 1 ineligible and 2 eligible P-16 council (voluntary and mandatory)

State	**Georgia**
Council Name	Georgia P-16 Initiative (1995)
Establishment	The Georgia P-16 Initiative was established by executive orders in 1995. On July 26, 1995, Gov. Zell Miller swore in 38 members to the Georgia P-16 Council
Participation	Statewide
Levels of education	Preschool, kindergarten, elementary school, middle school, high school, community college, vocational institutes, four-year colleges
Education members	Note: This is not a complete list, but members include: Georgia Department of Education, State Board of Education, Georgia Department of Technical and Adult Education, Georgia Professional Standards Commission, Department of Early Care and Learning, Governor's Office of Student Achievement, Georgia Student Finance Commission, Georgia Partnership for Excellence in Education, Georgia College and State University, Augusta State University, Clayton College & State University, Columbus State University, Georgia Southern University, Albany State University, Georgia State University, Fort Valley State University, University of Georgia, Kennesaw State University, Valdosta state University, Armstrong Atlantic state University, Georgia Southwest State University, State University of West Georgia, Columbus Technical institute, Darton College, Bainbridge College, Fort Valley State University, Macon State College, Middle Georgia College, Middle Georgia Technical College, East Central Technical College, Valdosta Technical College, Coastal Georgia Community College, Savannah State University, Savannah Technical College, Berry College, Coosa Valley Technical Institute, Floyd College, West Central Technical Schools, Moultrie Technical College; superintendents, principal, and teachers from districts throughout the state
Political members	Governor's Office, several state legislators
Business and community members	Georgia Department of Labor, Oxbow Meadows Environmental Learning Center, Coca Cola Space Science Center, several local chambers of commerce, business community members, social service/health professional representatives
Duration	On-going
Involvement	The network brings representatives together several times a year to focus on local, regional or statewide needs. The larger P-16 department is broken down into smaller regional councils that have different meeting schedules.

Function: Role in state policy	The P-16 Initiative brings together state policymakers and education leaders to coordinate P-16 policies.
Sources	State website: http://www.usg.edu/p16/about/ Membership: http://www.usg.edu/p16_archive/network/members.phtml P-16 Initiatives: http://www.usg.edu/p16/initiatives/PDFs/one_pagers/P-16_Binder.pdf Case study: http://www.highereducation.org/reports/governance_divide/GA/GA_case_study.pdf

State	**Georgia**
Ineligible P-16 Council	The Education Coordinating Council (ECC) was signed into legislation in 2000 as part of the A-Plus Education Reform Act of 2000. The work of the Council ended with the departure of Governor Barnes following the 2002 gubernatorial elections, so the Council fails to meet the duration criteria for this analysis.
Sources	A-Plus Education Reform Act of 2000: http://www.legis.state.ga.us/legis/1999_00/fulltext/hb1187.htm Case study: http://www.highereducation.org/reports/governance_divide/GA/GA_case_study.pdf ECS report: http://mb2.ecs.org/reports/Report.aspx?id=229

State	**Georgia**
Council Name	Alliance of Education Agency Heads
Participation	Statewide
Establishment	The Alliance of Education Agency Heads was launched by the heads of the seven state education agencies and under the leadership of the governor to build on the previous P-16 work in the states.
Levels of education	P-16 education
Education members	Superintendent of schools (chair), executive director of the Governor's Office of Student Achievement, Governor's education policy advisor, the Chancellor of the Board of Regents of the University System of Georgia, the commissioner of the Department of Technical and Adult Education, the executive secretary of the Georgia Professional Standards Commission, the commissioner of the Department of Early Care and Learning, and the president of the Georgia Student Finance Commission
Political members	None
Business and	Leaders from the business community are also involved in the

community members	Council's activities
Duration	Ongoing
Involvement	Not yet determined
Function: Role in state policy	The purpose of the Alliance is to direct the integration and expansion of Pre-K through post-secondary activities and to inform workforce development recommendations. The Alliance pursues five goals: increasing high school graduation rates, decreasing high school dropout rate, and increasing post-secondary enrollment rate; strengthening teacher quality, recruitment, and retention; improving workforce readiness skills; developing strong education leaders; and improving the SAT/ACT scores of Georgia students.
Sources	ECS report: http://mb2.ecs.org/reports/Report.aspx?id=229 Georgia Public Broadcasting report: http://www.gpb.org/public/education/pipeline.jsp?issueid=179&artid=883

HAWAII: 2 eligible P-16 councils (voluntary council later made mandatory)

State	**Hawaii**
Council Name	P-20 Steering Committee later renamed Hawaii P-20 Initiative Council
Establishment	April 2002 - In response to executive decisions by Liz Chun (Good Beginnings Alliance), Evan Dobelle (UH) and Patricia Hamamoto (DOE) and under the leadership of Randy Hitz, a P-20 Steering Committee is formed to initiate coalition-building and to identify benchmarks which might be used as a basis for organizing resources. October 2002 - P-20 white paper, authored by Liz Chun, Evan Dobelle and Pat Hamamoto, is issued in conjunction with the signing of a formal agreement. March 2003: P-20 Council holds its first meeting, facilitated by Carl Takamura of Hawai'i Business Roundtable. The Council received formal recognition and appropriations with Senate Bill 688 in July 2007.
Participation	Statewide
Levels of education	The "P" refers to provisions for early learning (not only in pre-schools, but in any setting) and the "20" refers to the years of schooling thereafter—beyond a college degree and even beyond graduate school. P-20 is the code for lifelong learning.
Education members	Kamehameha Schools, Joint Ventures Forum, UH Board of Regents, Good Beginnings Alliance, Pacific Resource Partnership, Hawaii DOE, Hawaii BOE, Hawaii PTSA, UH College of Education, UH Academic Affairs, HI Association of Independent Schools, UH Board of Regents, HI Teacher Standards Board, GBA Board, University of Hawaii, Hawaii Association for Education of Young Children, Hawaii Alliance for Arts Education, Hawaii State Teacher's Association, UH Professional Assembly, Chaminade University
Political	Governor's Office, 4 representatives from the state legislature

members	
Business and community members	Kāneʻohe Ranch, Hawaii Business Roundtable, Hawaii Government Employees Association, Chamber of Commerce, America's Promise, Strategic Planning Consultant
Duration	On-going
Involvement	Council determines to meet quarterly
Function: Role in state policy	The Hawaiʻi P-20 Initiative brings together public and private educators at all levels, working in collaboration with representatives of state government, the business community, labor and educational support agencies to focus on improving learner achievement in Hawaiʻi.
Sources	State website: http://www.hawaii.edu/p20/council.html P-20 Background: http://www.hawaii.edu/p20/p20background.html Chronology: http://www.hawaii.edu/p20/chronology.html Senate Bill: http://www.capitol.hawaii.gov/sessioncurrent/Bills/SB688_CD1_.htm

IDAHO: No eligible P-16 council

ILLINOIS: 1 ineligible P-16 council and 2 eligible P-16 councils (voluntary and mandatory)

State	**Illinois**
Ineligible P-16 Council	Illinois initiated a Joint Education Committee in 1998, which was a statutory body composed of board members from the Illinois State Board of Education, the Illinois Community College Board, the Illinois Board of Higher Education, and the Human Resource Investment Council. The JEC was charged with developing policy on matters of mutual concern to the four agencies. However, the JEC was a short-term committee that submitted a final report in 2002 and then ceased its operations, so it fails to meet the duration criteria for this analysis.
Sources	http://www.p20.niu.edu/p20/conferences/jec-report.shtml

State	**Illinois**
Council Name	Illinois P-16 Collaboration (1999)
Establishment	Established through voluntary collaboration during March 1999
Participation	Statewide
Levels of education	Preschool through college
Education members	University of Illinois at Chicago, University of Illinois at Urbana-Champaign, Illinois State University, Department of Education, Chicago Public Schools, Western Illinois University, American Commission on Education, Illinois Board of Higher Education, Chicago Teachers Union, Illinois Education Association, National-

	Louis University, Northern Illinois University, Illinois Community College board, American Association of Community Colleges, Illinois State Superintendent of Schools
Political members	None
Business and community members	Civic Committee of the Commercial Club of Chicago, Illinois Business Roundtable
Duration	On-going
Involvement	Agendas indicate at least 1-4 meetings per year
Function: Role in state policy	Basic strategies include: 1) clarifying, focusing, and aligning existing policies, priorities, and programs, 2) promoting public awareness of the need for increased educational attainment, 3) leveraging new resources, and redirecting the allocation of existing resources, 4) communicating consistently across educational levels to ensure coordinated action, and 5) holding agency staff and the schools or colleges/universities accountable for reaching specific progress benchmarks.
Sources	State website: http://www.p16.illinois.edu/P16_in_illinois.html P-16 update: http://www.p16.illinois.edu/docs/P-16_Update_Spring_2004.pdf First meeting minutes: http://www.ibhe.state.il.us/board/agendas/1999/february/1999-02-09.pdf Agendas: http://www.p16.illinois.edu/p16_in_illinois/IBHE_agenda_items.html

State	**Illinois**
Council Name	Illinois P-20 Council (2007)
Establishment	The P-20 council was established is the legislature with the passing of House Bill 1648 in July 2007.
Participation	Statewide
Levels of education	Preschool through graduate school
Education members	1 representative of parents' organizations, 1 education research expert,, 6 members representing pre-kindergarten through grade 20 teachers and faculty, 2 members representing local school administrators and school board members, 1 representative of community colleges, 1 representative of four-year independent colleges and universities, 1 representative of public 4-year universities, the state superintendent of education or designee, the executive director of the Board of Higher Education or designee, the president of the Illinois Community College Board or designee, the executive director of the Illinois Student Assistance Commission or designee, co-chairs of the Illinois Workforce Investment Board or designee, the chairperson of the Illinois Early Learning Council or designee, President of the Illinois Mathematics and Science Academy or designee

Political members	Governor or designee, 4 members of the General Assembly, 1 representative of local government
Business and community members	1 representative of civic leaders, 1 representative of trade unions, 1 representative of non-profit organizations or foundations, 5 members appointed by statewide business organizations and business trade associations, the director of Commerce and Economic Opportunity or designee
Duration	On-going
Involvement	Frequency of meetings not yet determined
Function: Role in state policy	The purpose of the P-20 Council is to advise the governor, the General Assembly, the state's education and higher education agencies, and the state's workforce and economic development boards and agencies on policies related to lifelong learning for Illinois studies and families.
Sources	House Bill 1658: http://www.ilga.gov/legislation/95/HB/PDF/09500HB1648lv.pdf

INDIANA: 1 eligible P-16 council (mandatory)

State	**Indiana**
Council Name	Indiana's Education Roundtable
Establishment	The Education Roundtable was formed in 1998 by Governor Frank O'Bannon and Superintendent of Public Instruction Dr. Suellen Reed. Formalized by legislation in 1999, now codified at IC 20-1-20.5-1 et seq.
Participation	Statewide
Levels of education	Pre-Kindergarten, K-12, and higher education.
Education members	Superintendent of Public Instruction, Indiana Commission of Higher Education, Evansville-Vanderburg School Corporation, Conexus Indiana, Indiana State Schools Boards Association, Butler University, State Board of Education, Purdue University, Indiana Department of Education, Indiana Association of School Principals, Indiana University, Hammond Federation of Teachers, Indiana Association of Public School Superintendents, Indiana State Teachers Association, Unionsville Elementary School, Vigo County School Corporation, Indiana Association of School Business Officials
Political members	Governor, Mayor of Terre Haute, 4 members of the House and Senate Education Committees
Business and community members	Retired Mexican Consul to Indianapolis, Indiana Chamber of Commerce, City of Terre Haute, Christel DeHaan Family Foundation, Rolls Royce, Roche Diagnostics Corporation, Diocese of Evansville, Hefner Investments, Indiana Manufacturers Association, Indiana state Building and Construction Trades, Indiana Youth Institute, Greensburg City Council
Duration	On-going

Involvement	There are meeting minutes online for 4 to 10 meetings per year
Function: Role in state policy	The group was charged with making recommendations on improving student achievement to the Governor, Superintendent of Public Instruction, General Assembly, and Indiana State Board of Education.
Sources	State web site: http://www.edroundtable.state.in.us/ About the Roundtable: http://www.edroundtable.state.in.us/about.shtml Members: http://www.edroundtable.state.in.us/members.shtml Meeting minutes: http://www.edroundtable.state.in.us/minutes.shtml

IOWA: 2 ineligible P-16 councils

State	**Iowa**
Ineligible P-16 Council	In 2001, Governor Vilsack signed Executive order 20 which established the Education Roundtable. The purpose of the organization was to create a "comprehensive effort to develop strategies for re-shaping the structure and nature of education…to coordinate the services that are delivered by all educational institutions within the State of Iowa. However, the executive order was designed to expire on July 1, 2002 after the committee submitted a final report, so the organization fails to meet the duration criteria for this analysis.
Sources	Executive order: http://publications.iowa.gov/archive/00002590/01/EO_20.pdf

State	**Iowa**
Ineligible P-16 Council	The Iowa Learns Council was established by Executive Order 30 by Governor Vilsack on September 25, 2003. The council is a "working group of key statewide educational leaders meet on a regular basis as a P-16 steering committee whose purpose should extend beyond regularly communicating activities and issues of mutual interest and engage education stakeholders in discussions that enhance community development." However, the Council was only active for one year and issued a final report on August 2004, so it fails to meet the criteria for duration in this analysis.
Sources	State website: http://www.state.ia.us/iowalearns/ Executive order: http://www.state.ia.us/iowalearns/doc/eo30.pdf Final report: http://www.state.ia.us/iowalearns/doc/finalreport.html

KANSAS: 1 ineligible P-16 council and 1 eligible P-16 council (voluntary)

State	**Kansas**
Ineligible P-16 Council	In January of 2003 Governor Sebelius appointed a diverse group of Kansans who were knowledgeable about education to an Education Task Force known as the Governor's Education Policy Team. The

	group met from February through June before and made final policy recommendations to the governor, but then ceased its operation after less than one year. This organization does not meet the duration criteria for this analysis
Sources	Press release : http://www.governor.ks.gov/news/NewsRelease/2003/nr-03-0131a.pdf Final recommendations: http://www.ljworld.com/specials/edteam_finrecm.pdf Topeka Capital-Journal, "Team to take aim at education" February 1, 2003

State	**Kansas**
Council Name	Kansas Transition Council
Participation	Statewide
Establishment	Established through voluntary collaboration in 2005 as a joint effort between the Commissioner of Education and the president of the Kansas Board of Regents. An official memo of understanding was signed on November 18, 2005.
Levels of education	K-12 education, community colleges, four-year universities
Education members	Kansas Board of Regents, University of Kansas, Emporia State University, Seward County Community College, Johnson County Community College, Wichita Area Technical College, National American University, Kansas State Department of Education, 1 principal, 1 teacher, 1 counselor, 1 high school vocational representative, 1 district curriculum leader, 1 superintendent, 1 local school board member
Political members	Governor's office
Business and community members	None
Duration	Ongoing
Involvement	The Council intends to meet quarterly
Function: Role in state policy	Initially, the Council will focus on the following goals: • Identify the knowledge and skills that students need to pursue postsecondary education, ensuring that they square with qualified admission requirements • Determine how postsecondary placement assessments can be used both as diagnostic tools and benchmarks to ensure student readiness • Recommend policies to ensure a smooth transition for students from high school to postsecondary education including a review of dual credit courses and secondary student access to technical programs
Sources	State website: http://www3.ksde.org/transition/ Letter to members: http://www3.ksde.org/transition/sample_letter.pdf

	Council members: http://www3.ksde.org/transition/transition_council_members.htm

KENTUCKY: 1 eligible P-16 council (voluntary)

State	Kentucky
Council Name	Kentucky P-16 Council
Establishment	Created by the Council on Postsecondary Education and the Kentucky Board of Education in spring 1999, it conducted the first of its quarterly meetings in July 1999.
Participation	Statewide
Levels of education	Elementary, secondary, and, postsecondary education
Education members	Three members of the Kentucky Board of Education, three members of the Kentucky Council on Postsecondary Education, the state Commissioner of Education, the President of the Council on Postsecondary Education, two representatives of the Education Professional Standards Board, the KDE Director of Early Childhood Development, the CPE Vice President for Adult Education, the Executive Director of Technical Education, the Commissioner of Workforce Investment, the Executive Director of the Kentucky Higher Education Assistance Authority, and the Secretary of the Education Cabinet. There are also 17 local/regional P-16 councils.
Political members	None
Business and community members	A business representative and a labor representative designated by the Kentucky Workforce Investment Board
Duration	On-going
Involvement	Quarterly meetings
Function: Role in state policy	Kentucky established an unprecedented model for influencing change by creating the Kentucky Policy Forum,
Sources	State website: http://cpe.ky.gov/committees/p16/ Members: http://apps.cpe.ky.gov/committees/members.asp?cc=C154 FAQs: http://cpe.ky.gov/committees/p16/p16_faq.htm Review: http://cpe.ky.gov/NR/rdonlyres/E90569DF-0BCD-447A-9972-AD7BCEDF83FA/0/ReviewAfterSixYears2005.pdf

LOUISIANA: 1 ineligible P-16 council

State	Louisiana
Ineligible P-16 Council	The Blue Ribbon Commission for Educational Excellence was formed in 1999 by the governor, state school board, and state board of regents.

	However, the commission was designed to address the single issue of teacher quality, so it fails to meet the criteria for function in this analysis.
Sources	State website: http://asa.regents.state.la.us/TE/brc Commission reports: http://asa.regents.state.la.us/TE/brc

MAINE: 1 ineligible P-16 council

State	Maine
Ineligible P-16 Council	"The Task Force to Create a Seamless Pre-Kindergarten through Sixteenth Grade Educational System" was created by executive order on March 26, 2004 by Governor John E. Baldacci. The role of the Task Force was to submit a final report to the Governor by January 15, 2005. Since the Task Force was in operation for less than a year, it fails to meet the criteria for duration in this analysis.
Sources	State website: http://www.maine.gov/education/pk16_task_force/homepage.htm Executive order: http://www.maine.gov/education/pk16_task_force/PK16TFExecOrdr.htm Final report: http://www.maine.gov/education/pk16_task_force/achieving_prosperity_for_all_maine_citizens_report.pdf

MARYLAND: 2 eligible P-16 councils (voluntary council later made mandatory)

State	Maryland
Council Name	Maryland K-16 Partnership for Teaching and Learning/ renamed the Maryland K-16 Leadership Council
Establishment	The Partnership was voluntary, in that educators at various levels came together to solve mutual problems related to system alignment, rather than being legislatively mandated or required to convene by the Maryland executive. It was initially supported by a 1995 grant from the Pew Charitable Trusts and it did not include legislators or Governor's representatives by design, in order to facilitate a climate in which educators, especially faculty and administers, would lead. House Bill 661 formalized the Maryland K-16 Leadership Council and was signed into law in 2007.
Participation	Statewide
Levels of education	Preschool through college
Education members	Representatives of the Maryland Higher Education Commission, Maryland State Department of Education, the University System of Maryland, University of Maryland at University College, Maryland Independent College and University Association, Maryland Coalition

	for Inclusive Education, Maryland State Board of Education, Towson University, Stephen Decatur Middle School, Colonel Richardson High School, USM Board of Regents, Wor-Wic Community College, Baltimore County Public Schools, American Association of Physics Teachers, Sharp-Leadenhall Elementary School, Severna Park Middle School, St. Mary's College, Salisbury University, Cecil County Public Schools, Morgan State University, College of Notre Dame of Maryland, Patterson Mill Middle/High school, Hartford County Public Schools, Maryland Association of Community Colleges
Political members	None
Business and community members	The College Board, Maryland Committee for Children, Maryland Business Roundtable
Duration	On-going
Involvement	The website shows monthly meetings in the past year.
Function: Role in state policy	The Partnership will address and develop strategies for strengthening PreK-16 standards, competencies, and assessments, the professional development of teachers, and community engagement in the PreK-16 initiative.
Sources	State web site: http://mdk16.usmd.edu/ Membership: http://www.maryland-k-16.org/images/files/PreK-16_LC_2006-2007_Membership.pdf Meeting calendar: http://mdk16.usmd.edu/inside.php?area_id=57 Bowler, M. (2001). Maryland's K-16 partnership. In G. I. Maeroff, P. M. Callan & M. D. Usdan (Eds.), *The learning connection: New partnerships between schools and colleges* (pp. 63-70). New York: Teachers College Press.

MASSACHUSETTS: 2 ineligible P-16 councils

State	**Massachusetts**
Ineligible P-16 Council	In 2005 the state established a short-term P-16 council of the Massachusetts Advisory Committee on Education Policy through a 2-year grant from the National Governor's Association. However, this council did not meet the criteria for duration in this analysis.
Sources	Trujillo, M. (2006, August 15). Leaders join forces to improve education from pre-K to college. The Boston Globe.

State	**Massachusetts**
Ineligible P-16 Council	The Readiness Project was created by executive order number 489 of Governor Deval Patrick and signed on August 6, 2007. There are more than 150 volunteers addressing P-16 issues from a systemic perspective, offering specific recommendations for state action.

	However, there are state agencies involved with the project so it fails to meet the criteria for membership in this analysis.
Sources	Executive order: http://www.mass.gov/Agov3/docs/Executive%20Orders/executive_order_489.pdf Council composition: www.mfw.us/filestore/download/2568

MICHIGAN: No eligible P-16 councils

MINNESOTA: 1 eligible P-16 council (voluntary)

State	**Minnesota**
Council Name	The Minnesota P-16 Education Partnership
Establishment	The Minnesota State Colleges and Universities and the University of Minnesota played lead roles in 2002 in developing and beginning implementation of a plan to create the Minnesota P-16 Education Partnership. The Partnership was formally rolled out in January 2003.
Participation	Statewide
Levels of education	Preschool through elementary, secondary, and postsecondary education
Education members	MnSCU, U of M, MN Private College Council, MN Career College Association, MACTE (MN Association of Colleges for Teacher Preparation), MN Office of Higher Education, MDE, Education MN, MN Association of School Administrators, MN Elementary School Principals Association, MN Association of Secondary School Principals, MN PTA, MMEP (MN Minority Education Partnership), MN School Boards Association, and MN Independent School Forum
Political members	None
Business and community members	Four additional members (MN Business Partnership, MN Chamber of Commerce, Citizens' League, and MN Council of Foundations were added in the summer of 2005.
Duration	On-going
Involvement	The online agendas indicate approximately 4 meetings per year.
Function: Role in state policy	It provides a forum in which critical policy issues can be collectively identified and addressed and data-driven decision-making structures can be developed and implemented statewide. Six working groups of the P-16 group were created and charged with addressing specific issues to accomplish the over-arching goal of the P-16 Initiative. Each group researched and created a report that provided a foundation for additional steps the State could take to address the various gaps and issues, including findings about the power and challenges of working collaboratively across multiple organizations and institutions.
Sources	Governor's workforce development council:

	http://www.gwdc.org/committees/Education_Action/subcommittees/Dec1306EACoverview.doc State website: https://education.state.mn.us/mde/About_MDE/News_Center/index.html MN State Colleges and Universities Postsecondary Planning Report: http://www.leg.state.mn.us/docs/2003/mandated/030458.pdf

MISSISSIPPI: 1 ineligible P-16 council

State	Mississippi
Ineligible P-16 Council	The Mississippi P-16 council was formed in 1995. It used to include heads for K-12, community colleges, and the universities, but is currently inactive. This council fails to meet the criteria for duration in this analysis.
Sources	ECS State Notes: http://mb2.ecs.org/reports/Report.aspx?id=229

MISSOURI: 2 eligible P-16 councils (voluntary and mandatory)

State	Missouri
Council Name	Missouri K-16 Task Force (1997)
Establishment	Missouri formed a voluntary K-16 coalition in 1997 to promote high standards and smooth transitions for all students.
Participation	Statewide
Levels of education	K-16: Kindergarten through college
Education members	The Coordinating Board for Higher Education (CBHE), the State Board of Education (SBE), and the University of Missouri Board of Curators (UM)
Political members	None
Business and community members	None
Duration	On-going
Involvement	No direct information available, but a Google search of the Missouri Department of Higher Education website included numerous meeting minutes that provided updates on the Task Force's progress so it appears that they met several times per year.
Function: Role in state policy	Missouri's first formal K-16 project, directed by Dr. Melvin George, resulted in the publication of Mathematics in Missouri in December 1999. In February 2001, Missouri's K-16 cosponsors launched another major initiative by appointing a K-16 Task Force on Achievement Gap Elimination (K-16-TAGE).
Sources	K-16 Coalition: http://www.dhe.mo.gov/achievementgapreport.shtml

State	Missouri
Council Name	Missouri P-20 Council (2006)
Establishment	Senate Bill 580, signed in 2006, created a P-20 Council charged to work collaboratively to achieve P-20 policy goals.
Participation	Statewide
Levels of education	P-20: Preschool through graduate school.
Education members	The commissioners of education and higher education, chairs of the State Board of Education and the Coordinating Board for Higher Education.
Political members	None
Business and community members	The Director of Economic Development
Duration	On-going
Involvement	Meets not less than twice each calendar year
Function: Role in state policy	No later than the first Wednesday after the first Monday of January each year, the persons outlined in subsection 1 of this section shall report jointly to the general assembly and to the governor the actions taken by their agencies and their recommendations for policy initiatives and legislative alterations to achieve the policy goals as outlined in this section.
Sources	State website: http://www.dhe.mo.gov/p20.shtml Senate bill: http://www.senate.mo.gov/06info/pdf-bill/tat/SB580.pdf

MONTANA: 2 ineligible P-16 councils

State	Montana
Ineligible P-16 Council	In the early 2000s, there was a P-20 committee on the Board of Education, in which the Board of Regents and Board of Public Education met together twice each year as the combined Board of Education. A meeting of the joint appropriations subcommittee on education in 2005 said the committee had been formed "a few years ago" and "has been informal; a more structured and formal model could be established concerning the P-20 committee." This original P-20 committee discussed joint issues of concern but did not have any role in policymaking so it fails to meet the function criteria for this analysis.
Sources	Joint Committee minutes: http://data.opi.state.mt.us/bills/2005/MinutesPDF/House/050121JEH_Hm1.pdf

State	Montana
Ineligible P-16 Council	Resolution of the Board of Education adopted on July 13, 2006 created the Kindergarten to College Workgroup. It also dissolved four committees under the Board of Education including the P-20 Committee. The Workgroup shall exist for a period of two years from the effective date of this Resolution. The Workgroup did not meet the criteria for duration in this analysis due to the temporary nature of the organization.
Sources	Resolution: http://governor.mt.gov/news/docs/Kindergarten_College_Res.pdf P-20 committee: http://www.montana.edu/wwwbor/P-20BOECommInfo.htm

NEBRASKA: 1 eligible P-16 council (voluntary)

State	Nebraska
Council Name	Nebraska P-16 Initiative
Establishment	Nebraska's P16 Initiative was launched in 1998 and has provided opportunities for the various levels and sectors of education to communicate and to undertake curriculum alignment projects. Beginning in January 2005, University of Nebraska President J.B. Milliken and Nebraska Commissioner of Education Doug Christensen initiated a renewed and refocused Nebraska P16 Initiative. This new Nebraska P16 Initiative is supported by Governor Dave Heineman and his Nebraska Education Leadership Council who recognize that education is a critical element in economic competitiveness in a knowledge-based, technology-driven global economy.
Participation	Statewide
Levels of education	Preschool through college
Education members	University of Nebraska, Nebraska Department of Education, Nebraska State College System, Nebraska Community College Association, Association of Independent College and Universities of Nebraska, Archdiocese of Omaha Catholic Schools, Calvert Elementary School, Coordinating Commission for Postsecondary Education, Nebraska Council of School Administrators, Nebraska State Education Association, Nebraska Association of School Boards, Nebraska PTA, Nebraska Association for the Education of Young Children Nebraska State Board of Education, University of Nebraska Board of Regents, Commissioner of Education
Political members	Governor Dave Heineman (chair), Senator Ron Raikes (co-chair), Governor's Policy Research Office, Nebraska Legislature Education Committee, State Budget Administrator
Business and community	Nebraska Farm Bureau, Grand Island Chamber of Commerce, Nebraska Chamber of Commerce and Industry, EducationQuest

members	Foundation, Nebraska Business-Higher Education Form, Lincoln Chamber of Commerce, Greater Omaha Chamber of Commerce, Nebraska Chamber of Commerce and Industry, Department of Economic Development, Department of Health and Human Services System, Nebraska Commission on Indiana Affairs, NAACP
Duration	On-going
Involvement	The event calendar shows multiple meetings every month. The history page indicates at least one annual meeting since 1998.
Function: Role in state policy	The P-16 Initiative has published numerous state policy reports for the governor and state legislature.
Sources	State web site: http://p16.nebraska.edu/about/ History: http://p16.nebraska.edu/about/history.shtml Fact sheet: http://p16.nebraska.edu/news/fact_sheet.pdf P-16 information: http://p16.nebraska.edu/news/information.shtml Membership: http://p16.nebraska.edu/contacts/index.shtml 2002 report: http://p-16nebraska.nebraska.edu/Math%20Task%20Force/NE%20Mathematics%20Articulation%20document%20revised2.pdf

NEVADA: 2 eligible P-16 councils (voluntary and mandatory)

State	**Nevada**
Council Name	Nevada P-16 Council (2002)
Establishment	A joint meeting began in January 2002 and members of the P-16 Council were approved on August 16, 2002.
Participation	Statewide
Levels of education	K-12 and higher education
Education members	Chancellor of the UCCSN, state superintendent of public instruction, president of Great Basin College, president of the state board of education, chair of the Council for Academic Standards, president of the education collaborative of Washoe County, 1 representative of the Board of Regents, 1 representative of the State Board of Education, 1 K-12 teacher, 1 UCCSN faculty member
Political members	Governor Kenny Guinn's deputy chief of staff, chair of the senate interim legislative committee on education, representative from the Assembly education committee
Business and community members	Head of the AFL-CIO in Nevada, representative from the northern Nevada business community, representative from the southern Nevada business community, executive director of the Boys & Girls Clubs of Las Vegas
Duration	On-going
Involvement	A Google search of the Nevada System of Higher Education website found numerous mentions of the work of the P-16 council in meeting minutes since 2002. The exact number of meetings per year is unknown

	but they do appear to be quite active and meeting at least once a year.
Function: Role in state policy	Involves members of the state government and the committee has testified in state legislative sessions.
Sources	Nevada System of Higher Education Press Release (2002) http://system.nevada.edu/News/Press/2002-Press /aug1602_2.html_cvt.html Senate committee minutes: http://www.leg.state.nv.us/72nd/Minutes/Senate/HR/Final/1742.html

State	**Nevada**
Council Name	P-16 Advisory Council (2007)
Establishment	The P-16 Advisory Council was created when Senate Bill 239 passed on March 7, 2007.
Participation	Statewide
Levels of education	Elementary, secondary, and higher education
Education members	One or more representatives of higher education, one or more representatives of elementary and secondary education, and one parent. The Chancellor of the Nevada Board of Regents and Superintendent of Public Instruction serve as ex-officio, non-voting members
Political members	One member of the House and one member of the Senate
Business and community members	One representative of private business, two members of the general public appointed by the Senate
Duration	On-going
Involvement	The Council shall meet at least once each calendar quarter and as frequently as necessary to afford the general public, representatives of governmental agencies and representatives of organizations an opportunity to present information and recommendations.
Function: Role in state policy	The council must submit a report of recommendations on topic such as standards alignment and linked data systems to the Board of Regents, state board, director of the legislative counsel bureau, legislative committee on education, and the governor.
Sources	Senate Bill 239: http://www.leg.state.nv.us/74th/Bills/SB/SB239_EN.pdf Board of Regents meeting minutes: http://system.nevada.edu/Board-of-R/Meetings/Agendas/August-200/Consent/Ref.-C-1b.pdf

NEW HAMPSHIRE: 1 eligible P-16 council (mandatory)

State	**New Hampshire**
Council Name	New Hampshire P-16 Working Group
Establishment	Executive order 2006-10 signed by Governor John Lynch on

	September 29, 2006.
Participation	Statewide
Levels of education	Elementary, secondary, and postsecondary education
Education members	The Commissioner of the New Hampshire Department of Education, the Chancellor of the University System of New Hampshire, the Commissioner of the New Hampshire Community Technical College System, the Executive Director of the New Hampshire Postsecondary Education Commission, the Executive Director of the New Hampshire College and University Council
Political members	A designee of the Governor
Business and community members	The president of the New Hampshire Workforce Opportunity council, a leader from the New Hampshire Business Community
Duration	On-going
Involvement	No information is available yet about the number of meetings per year.
Function: Role in state policy	The P-16 Working Group shall make recommendations to the governor regarding potential legislation, policies, and programs that will serve to enhance the development of a more integrated pre-kindergarten through college system in New Hampshire.
Sources	Executive order: http://www.nh.gov/governor/orders/documents/2006-10.pdf

NEW JERSEY: No eligible P-16 councils

The Higher Education Restructuring Act of 1994 requires greater communication between the Commission of Higher Education and the State Board of Education, but there is no formal structure in place.

NEW MEXICO: No eligible P-16 councils

There is a P20 Policy and Programs division, a joint initiative of the Higher Education Department and Public Education Department, to match up high school graduation requirements with college placement requirements (http://inst.hed.state.nm.us/content.asp?CustComKey=199036&CategoryKey=202894&pn=Page&DomName=inst.hed.state.nm.us), but there is no formal organizational structure in place for P-16 education. There is also a voluntary K-16 council but it only deals with issues of teacher education accountability.

NORTH CAROLINA: 1 eligible P-16 council (mandatory)

State	**North Carolina**

Council Name	North Carolina Education Cabinet
Establishment	The General Assembly, in GS 116C-1, created the North Carolina Education Cabinet in 1992 to ensure cooperation among all entities of the state's education system.
Participation	Statewide
Levels of education	K-12, community college, four-year universities
Education members	Superintendent of public instruction, chair of the state board of education, president of the University of North Carolina, president of the North Carolina Community College System, President of the Association of Independent Colleges and Universities (recently added)
Political members	Governor (chair)
Business and community members	None
Duration	On-going
Involvement	A formal meeting of the members of the state's three education governing boards and the cooperating governing board of the independent colleges and universities is held annually to discuss issues that complement the structure, funding and responsibilities of the systems.
Function: Role in state policy	These education leaders work together to resolve issues between existing providers of public education and to develop a strategic design for a continuum of education programs.
Sources	State Board of Education website: http://www.dpi.state.nc.us/state_board/SBE_history/chapter8.html State statute: http://www.ncga.state.nc.us/EnactedLegislation/Statutes/pdf/ByChapter/Chapter_116C.pdf

NORTH DAKOTA: 1 ineligible P-16 council

State	**North Dakota**
Ineligible P-16 Council	In September of 2005, the Joint Boards of Education created a P-16 education task force, which met once a month for a year and then submitted a final report. The short-term nature of this organization does not meet the duration criteria in this analysis.
Sources	http://www.ndus.edu/uploads%5Cdocument-library%5C1145%5CP-16_TASKFORCE_REPORT_9-26-06.PDF

OHIO: 2 eligible P-16 councils (voluntary and mandatory)

State	**Ohio**
Council	Joint Council

Name	
Establishment	The Joint Council of the State Department of Education and the Ohio Board of Regents was created in 1997 following the recommendation of the Secondary and Higher Education Remediation Advisory Commission (SHERAC), a commission formed of various K-16, governmental and community stakeholders to study the problem of high remediation levels in Ohio's 2- and 4-year postsecondary campuses. SHERAC in its 1997 report, "A Total Approach: Improving College Preparation in Ohio", recommended that higher education and K-12 be linked at the state-system level to build a common agenda for education in Ohio.
Participation	Statewide
Levels of education	K-12 through postsecondary education
Education members	The Superintendent of Public Instruction, the Chancellor of the Ohio Board of Regents and three members from both the Board of Regents and the State Board of Education
Political members	None
Business and community members	None
Duration	Ongoing
Involvement	The Joint Council of the two boards meets quarterly.
Function: Role in state policy	The initial charge to the Joint Council focused on the following areas: (1) the identification of competencies that all students should know and be able to do at the exit from high school and the identification of competencies required for success in the first-level college class or the workplace; (2) a total system strategy to enable students to experience successful transitions from one education system to another and from education to career; (3) increase the aspiration and expectations of students for success and in achieving high academic standards; (4) improve the quality of learning experiences for all students and the preparation of teachers through the simultaneous reform of teacher education and school practices; and (5) implement innovative funding strategies and systemwide efforts to significantly reduce remediation rates in higher education of recent high school graduates.
Sources	ECS report: http://mb2.ecs.org/reports/Report.aspx?id=229 Media release: http://regents.ohio.gov/board_meetings/bdmeet/sep04/bdmeet_SPEC_092204.pdf

State	**Ohio**
Council Name	The Ohio Partnership for Continued Learning
Establishment	Established by Senate Bill 6 on August 12, 2005. This new collaborative partnership will replace the Joint Council

	which was formed in 1997 in response to recommendations from the Secondary and Higher Education Remediation Advisory Commission.
Participation	Statewide
Levels of education	Preschool through postsecondary education
Education members	Superintendent of Public Instruction, Chancellor of the Board of Regents, Director of Development, 2 representatives of organizations that have formed regional partnerships that foster collaboration among providers of preschool through postsecondary education, 1 member of the Student Access and Success Coordinating Council of Ohio, 2 representatives of elementary and secondary schools including 1 member of the state board of education and 1 representative of chartered nonpublic schools, 2 representatives of institutions of higher education including one member of the Board of Regents and one representative of private institutions of higher education
Political members	Governor (chair), the chairpersons and ranking minority members of the education committees of the Senate and the House of Representatives
Business and community members	3 representatives of the private sector and 1 member of the State Workforce Policy Board
Duration	On-going
Involvement	The Partnership must meet at least quarterly and at other times upon the call of the chairperson
Function: Role in state policy	Responsibilities include factors such as the "alignment of statewide academic content standards for grades 9 through 12, the Ohio Graduation Tests, and the curriculum requirements for a high school diploma with the expectations of prospective employers and postsecondary institutions regarding the knowledge and skills high school graduates should attain."
Sources	State web site: http://www.pcl.ohio.gov/jcore/pcl/HomeContent.jsp Statute: http://www.legislature.state.oh.us/analysis.cfm?ID=126_SB_6&ACT=As%20Enrolled&hf=analyses126/05-sb6-126.htm Bill Summary: http://regents.ohio.gov/legislative/synopsis/SB6%20-partnershipforcontinuedlearning%20.pdf

OKLAHOMA: 1 eligible P-16 council (mandatory)

State	**Oklahoma**
Council Name	Achieving Classroom Excellence (ACE)
Establishment	In 2005, the Oklahoma legislature passed the governor's initiative called Achieving Classroom Excellence through Senate Bill 982.
Participation	Statewide

Levels of education	K-12 through higher education
Education members	Three administrators, six teachers, one school board member, director of the State Department of Career and technology Education, Chancellor of the Oklahoma State Regents for Higher Education, State superintendent of public instruction
Political members	Two members of the state senate, two members of the state house of representatives
Business and community members	Three representatives of the private business sector
Duration	Ongoing
Involvement	Not available
Function: Role in state policy	The task force shall study, hold public hearings, and make recommendations regarding eighth grade and high school students on: subjects to be included for demonstration of mastery, additional end-of-instruction tests to be developed, benchmarks and cut scores for assessments, optional methods to demonstrate subject matter mastery, alternatives for ELL and special needs students, exceptions that may be needed, intervention strategies, remediation options, consequences for students, review of other states' experiences, development of an action plan to implement recommendations, and information to provide teachers, parents and students that will emphasize this initiative as a tool to improve student success.
Sources	State website: http://www.okea.org/ACE/ Senate bill: http://www.okea.org/ACE/SB982.pdf

OREGON: 1 eligible P-16 council (voluntary), 3 ineligible P-16 councils

State	**Oregon**
Council Name	Unified Education Enterprise (UEE) Working Group of the Joint Boards
Establishment	The UEE was formed by the Joint Boards of Education in response to Senate Bill (SB) 342, signed in July 2005, which sought to improve the transition among different levels of education. The bill did not create the UEE, rather the state's educational organizations formed the UEE to facilitate their response to this bill.
Participation	Statewide
Levels of education	K-12 and higher education
Education members	Members of the state board of education, Oregon University System, several K-12 employees, several university employees, and several community college representatives
Political members	None

Business and community members	None
Duration	On-going
Involvement	The UEE appears to meet at least several times per year
Function: Role in state policy	"UEE's immediate focus will be on alignment of standards and assessment; policies governing accelerated learning; and pathways from high school to college, technical training, and career"
Sources	Press release: http://www.ous.edu/about/legnote/files/SB%20342%20brief%20final%202007.pdf Senate Bill 342: http://atlas.ous.edu/documents/sb0342.a.pdf UEE website: http://www.ous.edu/about/uee/ UEE roster: http://www.ous.edu/about/uee/members.php UEE meetings: http://www.ous.edu/about/uee/meetmat.php

State	**Oregon**
Ineligible P-16 Council	In 1977, Oregon Revised Statute 348.890 created the "Joint Boards" comprised on the Oregon State Board of Higher Education and the Oregon State Board of Education to explore topics of mutual concern. There were no other members and the board had no role in policy, so the Board fails to meet the criteria for function in this analysis.
Sources	Joint Boards statute: http://whiz.to/~papera/ORS/348.html Case study: http://www.highereducation.org/reports/governance_divide/OR/OR_case_study.pdf

State	**Oregon**
Ineligible P-16 Council	In 1993 Governor Barbara Roberts issued executive orders for the state board of education and the university system to work together. The Office of K-16 alignment is a small department within the Oregon university system and fails to meet the criteria for statewide agency participation in this analysis.
Sources	Office of K-16 alignment: http://k16.ous.edu/

State	**Oregon**
Ineligible P-16 Council	In fall 2005, the Gates Foundation awarded the Oregon Department of Education a $1.75 million grant to support statewide efforts to redesign high schools and address PK-20 systemic improvements known as the Oregon PK-20 Redesign. Led by the Joint Boards in partnership with the Governor's Office, the grant addresses four areas: 1) high school graduation/diploma requirements, 2) systems alignment/integration, 3) PK-20 budget/system performance measures, and 4) communications. The PK-20 redesign project extends from November 2005 through June

	2007, so it fails to meet the criteria for duration in this analysis.
Sources	State website: http://www.ode.state.or.us/search/results/?id=85 K-20 Redesign overview: http://www.ode.state.or.us/teachlearn/specialty/pre-post/k20overview.pdf

PENNSYLVANIA: 1 ineligible P-16 council

State	Pennsylvania
Ineligible P-16 Council	With an allocation from the Pennsylvania Department of Education, seven councils were formed in the fall of 2000 to create the Pennsylvania State K-16 Council Initiative. Seven councils were funded, and four groups were given planning funds to begin to form their councils. However, this was a series of regional initiatives rather than a statewide initiative, and the councils lacked state agency participation so the participation and membership criteria for this analysis are not met.
Sources	State website: http://www.passhe.edu/content/?/office/academic/Academy/councils/state Regional council goals: http://www.passhe.edu/content/?/office/academic/Academy/councils

RHODE ISLAND: 1 eligible P-16 council (mandatory)

State	Rhode Island
Council Name	Statewide PK-16 Council
Establishment	Executive order 05-08 signed on April 25, 2005 by Donald Carcieri.
Participation	Statewide
Levels of education	Elementary, secondary, postsecondary, and workforce development
Education members	The Chair of the Board of Governors for Higher Education, the Chair of the Board of Regents for Elementary and Secondary education, the Commissioner of Elementary and Secondary Education, the Commissioner or Higher Education, and the Director of the Department of Labor and Training
Political members	Governor
Business and community members	The Executive Director of the Rhode Island Economic Development Corporation, the Chair of the Rhode Island Economic Policy Council, and the Chair of the Human Resources Investment Council
Duration	On-going
Involvement	A Google search of the Rhode Island Board of Governors for Higher Education website indicates several meetings of the PK-16 council.
Function:	The functions of the PK-16 Council will be to recommend to the

Role in state policy	appropriate board or agency policies designed to perform functions such as: Align standards for achievement in reading, writing, and mathematics so that students graduating from Rhode Island high schools are fully prepared for college-level work
Sources	Executive order: http://www.governor.ri.gov/documents/executiveorders/2005/08_PK16.pdf Press release: https://www.ri.gov/GOVERNOR/view.php?id=595 RI Board of Governors for Higher Education http://www.ribghe.org/

SOUTH CAROLINA: 1 eligible P-16 council (mandatory)

State	**South Carolina**
Council Name	Education and Economic Development Coordinating Council
Establishment	The council was formed as Section 595-59-170 of The Education and Economic Development Act of 2005. Initial appointments must be made by October 1, 2005, at which time the Governor shall call the first meeting.
Participation	Statewide
Levels of education	Pre-Kindergarten through postsecondary studies
Education members	State Superintendent of Education or his designee; Executive Director of the State Board for Technical and Comprehensive Education or his designee; Executive Director of the South Carolina Commission on Higher Education or his designee; a school district superintendent; a principal; a school guidance counselor; a teacher; the director of a career and technology center; the president or provost of a research university; the president or provost of a four year college or university; the president of a technical college
Political members	Chairman of the Education Oversight Committee or his designee; a member from the House of Representatives appointed by the Speaker of the House; and a member from the Senate appointed by the President Pro Tempore.
Business and community members	Executive Director of the South Carolina Employment Security Commission or his designee; Secretary of the Department of Commerce or his designee; Executive Director of the South Carolina Chamber of Commerce or his designee; ten representatives of business appointed by the Governor, at least one of which must represent small business.
Duration	On-going
Involvement	The council is required to report to the governor and general assembly annually.
Function: Role in state policy	The council shall report annually by December first to the Governor, the General Assembly, the State Board of Education, and other appropriate governing boards on the progress, results, and compliance with the provisions of this chapter and its ability to provide a better

	prepared workforce and student success in postsecondary education.
Sources	State website: http://www.teachscpathways.org/Council.html Statute: www.scstatehouse.net/code/t59c059.doc

SOUTH DAKOTA: No eligible P-16 councils

TENNESSEE: 2 ineligible P-16 councils and 1 eligible P-16 council (voluntary)

State	**Tennessee**
Ineligible P-16 Council	Tennessee Tomorrow Inc. – a 501 (c)(3) organization - was created in 1994 when then-Governor Ned McWherter and Bellsouth President DeWitt Ezell recognized the need for a statewide public-private partnership to support economic and community development initiatives. Although this organization includes members of K-12 and higher education agencies in the state, the purpose is to improve economic and community development opportunities. Since this organization does not focus more specifically on aligning K-12 and higher education policies, it does not meet the criteria for function in this analysis.
Sources	State website: http://tntomorrow.org TTI Mission: http://tntomorrow.org/tti/tti_page.php?page_id=2 TTI Leadership: http://tntomorrow.org/tti/tti_leadership.php

State	**Tennessee**
Council Name	P-16 council (2001)
Establishment	On October 10, 2001, the Tennessee Higher Education Commission (THEC) co-sponsored a Pathways to College P-16 Policy Roundtable to examine the need for creating a statewide P-16 Council to address critical issues such as teacher education and curriculum alignment. Participants included 16 K-12, postsecondary, legislative and executive leaders. Following the Roundtable, THEC moved promptly to convene the first meeting of the P-16 Council on November 29, 2001.
Participation	Statewide
Levels of education	K-12 and higher education
Education members	State Department of Education, State Board of Education, University of Tennessee System, Tennessee Board of Regents, Tennessee Independent Colleges and Universities Association, Tennessee Higher Education Commission
Political members	Representative from the governor's office
Business and	Tennessee Business Roundtable, Tennessee Chamber of Commerce and

community members	Industry
Duration	On-going
Involvement	N/A
Function: Role in state policy	The Council endorsed a state-wide focus on mathematics standards and curriculum alignment as a major pipeline initiative. This initiative is linked to the GEAR UP project, existing high school redesign, and other converging K-12-directed efforts.
Sources	THEC P-16 Council: http://state.tn.us/thec/2004web/division_pages/ppr_pages/Policy/math.html Pathways to College report: http://www.pathwaystocollege.net/pdf/TennesseeRoundtable.pdf THEC Presentation: http://state.tn.us/thec/2004web/division_pages/ppr_pages/pdfs/Policy/Math/Workforce%20Dev%2051906.ppt#1

State	**Tennessee**
Ineligible P-16 Council	Tennessee Pk-16 Education Network is a series of regional P-16 councils which was organized under the Tennessee Board of Regents in 2002. They had an "annual" meeting in 2002, 2003, 2006, and 2007. This organization fails to meet the criteria for statewide participation and involvement in this analysis.
Sources	Board of Regents P-16 website: http://www.tbr.state.tn.us/academic_affairs/p16/

TEXAS: 2 eligible P-16 councils (voluntary council later made mandatory)

State	**Texas**
Council Name	Public Education/Higher Education Coordinating Group (1998) Texas P-16 Council (2003)
Establishment	In Texas, the P-16 collaborative began in 1998 as an informal network called the Public Education/Higher Education Coordinating Group. In 2003, the Texas Legislature formalized the system by passing Senate Bill 286 which created the P-16 Council as defined in Sections 61.076 and 61.077 of the Education Code. In 2005, the Legislature modified and strengthened the P-16 statute by passing House Bill 2808, which amends Section 61.076 and repeals Section 61.077 of the Education Code. Section 61.076 outlines Council membership.
Participation	Statewide
Levels of education	An integrated system of education stretching from preschool (the "P") through a four-year college degree ("grade 16").
Education members	Commissioners of the Texas Education Agency (TEA), Texas Higher Education Coordinating Board (THECB), State Board for Educator Certification (SBEC), representatives from university systems and education associations

Political members	Representatives from the legislature, the governor's office
Business and community members	Representatives from other state agencies and business coalitions
Duration	On-going
Involvement	The council shall meet at least once each calendar quarter and may hold other meetings as necessary at the call of the co-chairs.
Function: Role in state policy	The council shall coordinate plans and programs, including curricula, instructional programs, research, and other functions as appropriate.
Sources	Texas Education Code Section 61: http://tlo2.tlc.state.tx.us/statutes/docs/ED/content/pdf/ed.003.00.000061.00.pdf House Bill 2808: http://www.capitol.state.tx.us/BillLookup/Text.aspx?LegSess=79R&Bill=HB2808 P-16 summary: http://www.tea.state.tx.us/p16/p16_exec_summ.pdf

UTAH: 1 eligible P-16 council (voluntary)

State	**Utah**
Council Name	K-16 Alliance
Establishment	The K-16 Alliance was formalized in October of 2005.
Levels of education	K-12 through Higher Education
Participation	Statewide
Education members	Chair of Regents, Chair of the Board of Education, State Board members
Political members	Governor, Governor Deputy on Education, legislators
Business and community members	Community members
Duration	On-going
Involvement	A 2006 report of the State Board of Regents indicates that the Alliance has been meeting regularly for the past two years.
Function: Role in state policy	The Alliance includes the governor and members of the state legislature, and has provided recommendations on issues such as concurrent enrollment and teacher shortages.
Sources	State Board of Regents report: http://www.utahsbr.edu/Agendas/2006_Agendas/Sep15tabs/Tab_P_Strategic_Directions_memo.pdf Agenda minutes: http://utahsbr.edu/Agendas/2007/Apr19Tabs/Tab_T.pdf Agenda minutes: http://www.utahsbr.edu/Minutes/2005Minutes/Oct_27_2005.pdf

VERMONT: 1 ineligible P-16 council

State	Vermont
Ineligible P-16 Council	The Vermont Public Education Partnership (VPEP) was established in 2001 to address the K-16 issues as a voluntary group made up of the state commissioner of education, the president of the University of Vermont and the chancellor of the Vermont State College system. This organization is no longer in service so it fails to meet the criteria for duration in this analysis.
Sources	ECS report: http://mb2.ecs.org/reports/Report.aspx?id=229 Aspen Institute Report: http://www.aspeninstitute.org/atf/cf/%7BDEB6F227-659B-4EC8-8F84-8DF23CA704F5%7D/ECSRethinkingHighSc.pdf

VIRGINIA: 1 ineligible P-16 council

State	Virginia
Ineligible P-16 Council	Virginia's P-16 Council was created by executive order (Warner, EO 100) in October 2005, and continued under Governor Kaine (EO 40) in October 2006. The council was initially in effect for one year but a second executive order extended the duties of the council until 2008. Due to the short-term nature of this council, it does not meet the duration criteria for this analysis.
Sources	Secretary of Education website: http://www.education.virginia.gov/Initiatives/P-16Council/index.cfm Executive order (2005): http://www.dpb.virginia.gov/EO/EO100(05).pdf Executive order (2006): http://www.pen.k12.va.us/VDOE/honorschools/EO_40.pdf

WASHINGTON: 2 eligible P-16 councils (voluntary and mandatory)

State	Washington
Council Name	Advisory Council (2004)
Establishment	House Bill 3103 was the first comprehensive review of the HECB's role and responsibilities since it was established in 1985. It defined the composition of an Advisory Council that seems to lend itself to P-16 issues.
Participation	Statewide
Levels of education	K-12 and higher education
Education	Office of the Superintendent of Public Instruction, State Board of

members	Education, State Board for Community and Technical Colleges, Workforce Training and Education Coordinating Board, Research Universities, Comprehensive Universities, Faculty of Four-year Schools, Proprietary Schools, Independent Colleges, Faculty of Two-year Colleges
Political members	None
Business and community members	None
Duration	On-going
Involvement	The Advisory Council website provides agendas for 2 to 4 meetings each year since 2004.
Function: Role in state policy	Topics to address include: Expansion of dual enrollment options for students; articulation agreements between institutions of higher education and high schools; improved alignment of high school preparatory curriculum and college readiness. The board, in conjunction with the other education agencies, shall submit a biennial update on the work accomplished and planned under this section to the education and higher education committees of the legislature.
Sources	Advisory Council website: http://www.hecb.wa.gov/about/advisory/advisoryindex.asp Advisory Council Meeting minutes: http://www.hecb.wa.gov/docs/packets/2004/July/ boardpacket.pdf

State	**Washington**
Council Name	Governor's P-20 Council (2007)
Establishment	P-20 Council: Executive order 07-05 by Governor Christine Gregoire on August 2, 2007 (revised from executive order 07-03 on June 14, 2007)
Participation	Statewide
Levels of education	Early learning, K-12, higher education and workforce preparation
Education members	Superintendent of Public Instruction, chair of the Washington Learns Early Learning Council, Chair of the Washington Learns Higher Education Advisory Committee, Director of the Department of Early learning, Chair of the State Board of Education, Chair of the Professional Educator Standards Board, Chair of the Higher Education Coordinating Board, Chair of the Workforce Training and Education Coordinating Board, Chair of the State Board for Community and Technical Colleges, Chair of the Council of Presidents, Chair of the Independent Colleges of Washington, representative of tribal education programs, President of the Washington Association of Community and Technical Colleges
Political	Governor

members	
Business and community members	Other agencies will provide information and support as requested by the governor.
Duration	On-going
Involvement	The P-20 Council will meet on a quarterly basis
Function: Role in state policy	The P-20 Council will include leaders responsible for carrying out education policies and investments within our state and the three advisory committee chairs from the Washington Learns Steering Committee. With the participation of leaders from each level of education and from the three advisory committee chairs, the P-20 Council will hold our education system accountable for results that will best serve our children, our families, and our economy.
Sources	Executive order: http://www.governor.wa.gov/execorders/eo_07-05.pdf P-20 State website: http://www.p20council.wa.gov/default.htm P-20 Meeting schedule: http://www.p20council.wa.gov/meetings.htm

WEST VIRIGINIA: 1 ineligible P-16 council and 1 eligible P-16 council (mandatory)

State	**West Virginia**
Ineligible P-16 Council	Governor Wise's executive order created the P-20 Council of West Virginia on February 15, 2001. The P-20 Council was sunset in December 2004 so the council fails to meet the duration criteria for this analysis.
Sources	ECS report: http://mb2.ecs.org/reports/Report.aspx?id=229 West Virginia Workforce Investment Council Report: http://www.wvwic.org/minutes/WICMtg12_17_03.pdf

State	**West Virginia**
Council Name	21st Century Jobs Cabinet of West Virginia
Establishment	Gov. Joe Manchin III signed executive order 7-06 on September 5, 2005, creating the "21st Century Jobs Cabinet of West Virginia".
Participation	Statewide
Levels of education	The Cabinet will focus on promoting an education system that connects every level of education from early childhood to graduate study, encompassing job training and lifelong learning.
Education members	The Secretary of the Department of Education and the Arts, the State Superintendent of Schools, the Chief Executive Officer for the Center for Professional Development, the Chancellor of Higher Education, the Chancellor for Community and Technical College Education, the Commissioner of the Bureau for Children and Families, a member of the State Board of Education, a member of the Higher Education Policy Commission, a member of the Workforce Investment Council, 3

	educators from different geographic regions (elementary, middle, and high school), one person representing non-public primary education, one person representing a private college or university
Political members	First lady (co-chair), chair of the West Virginia Senate Committee on education, chair of the West Virginia House of Delegates Committee on education, the West Virginia Senate Chair on the Joint Commission on Economic Development, and the West Virginia House of Delegates Chair of the Joint Commission on Economic Development
Business and community members	Orrick, Herrington & Sutcliffe, LLP (co-chair); a member of the West Virginia Council for Community and Economic Development, 5 individuals representing business, industry and parents of West Virginia students
Duration	On-going
Involvement	The Cabinet shall meet at times and locations to be determined by the Cabinet co-chairs in consultation with the Cabinet members. The Cabinet shall be held accountable for annual performance measures and required to respond to these criteria in a public report on its actions presented to the governor, the legislature, and the public by the thirty-first day of December each year.
Function: Role in state policy	The cabinet shall have the authority and responsibility to propose and endorse legislation and to oversee the implementation of policy and budget decisions.
Sources	Governor's executive orders (received via email from the West Virginia secretary of state's office) Press release: http://wboy.com/story.cfm?func=viewstory&storyid=13836&catid=214

WISCONSIN: 1 eligible P-16 council (voluntary)

State	**Wisconsin**
Council Name	Wisconsin PK-16 Leadership Council
Establishment	The leaders of Wisconsin's education sectors -- John Benson (Department of Public Instruction) and Katharine Lyall (University of Wisconsin System), along with Edward Chin (Wisconsin Technical College System) and Rolf Wegenke (Wisconsin Association of Independent Colleges and Universities) -- joined together to organize the Wisconsin PK-16 Leadership Council. In December 2000, members of the Leadership Council were asked to identify at least one staff liaison to serve on the Implementation Team. The Implementation Team met in December to prepare for the initial meeting of the Wisconsin PK-16 Leadership Council. The first official meeting was March 1, 2001.
Participation	Statewide
Levels of education	Pre-kindergarten through college-coordinate initiatives

Education members	Wisconsin State Superintendent of Public Instruction, President of the University of Wisconsin System, President of the Wisconsin Technical College System, President of the Wisconsin Association of Independent Colleges and Universities, Executive Secretary of the Educational Approval Board, Chair of the Cooperative Education Service Agencies, Secretary of the Department of Workforce Development, WI Association of School Boards, WI Association of School Districts, WI Education Association Council, Association of WI School Administrators, WI Parent Teachers Associations, WI Council of Religious and Independent Schools, WI Technical College Districts Boards Association, and several educators
Political members	Governor (or representative); Chairs and vice-chairs of the following committees: Senate Education Committee, Assembly Education Committee, Assembly College and Universities Committee, Senate Agriculture and Higher Education Committee, Assembly Education Reform Committee
Business and community members	Wisconsin Manufactures and Commerce, Wisconsin AFL-CIO, AFT-Wisconsin
Duration	On-going
Involvement	There have been 3 to 4 meetings per year since 2001.
Function: Role in state policy	The PK-16 Leadership Council would seek to foster coordination and collaboration between educational systems in Wisconsin, to share responsibility for education reform and improved student achievement, to provide a forum for information sharing and to influence educational policy.
Sources	State website: http://www.wisconsin.edu/pk16/ History: http://www.wisconsin.edu/pk16/history.htm Participants: http://www.wisconsin.edu/pk16/partici.htm Meetings : http://www.wisconsin.edu/pk16/meetings/meetings.htm

WYOMING: 1 ineligible P-16 council and 1 eligible P-16 council (voluntary)

State	**Wyoming**
Ineligible P-16 Council	In 1997, statute § 21-16-602 was added, which created the Wyoming Education Planning and Coordination Council including members of K-12 and higher education. However, the purpose of this council was to "Facilitate cooperative arrangements among state education institutions in the sharing of facilities, personnel and technology or otherwise assist in articulation between the institutions" rather than to align state policy. This council does not meet the criteria of function for this analysis.
Sources	Information was downloaded from LexisNexis' collection of state statutes.

State	Wyoming
Council Name	Wyoming P-16 Education Council
Participation	Statewide
Establishment	Efforts to establish a P-16 Council in Wyoming were tentative until the University of Wyoming's associate vice president for academic affairs, Rollin Abernethy, joined with Charlie Ware, head of the Wyoming Contractors Association, and Deputy Superintendent of Public Instruction Joe Simpson in 2006 to form and serve as executive officers for a nonprofit, non-governmental council. Governor Freudenthal announced the formation of the council on August 21, 2007 (not an executive order).
Levels of education	Pre-Kindergarten, K-12, and higher education
Education members	University of Wyoming, Community College Commission, 2 teachers, Wyoming School-University Partnership, Wyoming Association of School Administrators, Wyoming State Department of Education, Wyoming Education Association
Political members	Office of the governor, 2 representatives of the Joint Education Committee of the Wyoming Legislature
Business and community members	Wyoming Child and Family Development, Qwest Wyoming, Wyoming Inc., Wyoming Workforce Development Council
Duration	On-going
Involvement	The council has already met once this year
Function: Role in state policy	Goals include: Developing a package of coherent policies at the state, district and school levels that focus on standards-based improvement of student performance; providing recommendations to the Governor, the Legislature and other top education policymakers.
Sources	State website: http://www.wp-16.org/ Background: http://www.wp-16.org/background.asp Members: http://www.wp-16.org/members.asp

Appendix B: Index of Education Words Coded in Governors' Speeches

The following words were used to initially identify education-related context in the governors' state-of-the-state speeches:

Academic
Achievement
Assessment
Campus
Class size
Classroom
College
Concurrent Enrollment
Content Standards
Coursework
Curriculum
Degree
Dropout
Dual Enrollment
Educate
Education
Educator
Faculty
Financial Aid
Grade
Graduate
Graduation
Homework
K-12
K-16/ K-20
Kindergarten
Learn
Literacy
Instruction
Mathematics/ Math
No Child Left Behind
P-16/ P-20
Pell Grant
Preschool
Principal
Professor
Proficient/ Proficiency
Pupil
Reading
Remedial
Report card
Scholarship
School
Student
Superintendent
Teach
Teacher
Tutor
Tuition
University(ies)

Appendix C: IRB Approval Letter

Vanderbilt University
Institutional Review Board
504 Oxford House Nashville, Tennessee 37232-4315
(615) 322-2918 Fax: (615) 343-2648
www.mc.vanderbilt.edu/irb

01/09/2008

Christine Mokher
Leadership, Policy & Organizations - Public Policy and Education

Nashville, TN

MICHAEL MCLENDON
Leadership, Policy & Organizations - Public Policy and Education
514 Peabody College 37203-5721

RE: IRB# 071295 "Developing Networks for Educational Collaboration: An Event History Analysis of the Spread of Statewide P-16 Councils"

Dear Ms. Mokher:

A designee of the Institutional Review Board reviewed the Request for Exemption application identified above. It was determined the study poses minimal risk to participants. This study meets 45 CFR 46.101 (b) category (4) for Exempt Review. Approval is extended for the Request for Exemption application dated 11/30/2007 for Principal Investigator Christine Mokher.

Exempt studies do not require annual reviews, however, any changes to the research proposal must be presented to the IRB for approval before implementation.

DATE OF IRB APPROVAL: 01/09/2008

Sincerely,

Alyn Taylor

Alyn K. Taylor, Protocol Analyst II
Institutional Review Board
Behavioral Sciences Committee

Electronic Signature: Alyn K Taylor/VUMC/Vanderbilt : (794CB85A7E2ED28B10190FFCD33C8358)
Signed On: 01/09/2008 10:12:36 AM CST

REFERENCES

Ambrosius, M. M. (1989). The role of occupational interests in state economic development policy-making. *Western Political Quarterly, 42*(1), 53-68.

Arganoff, R., & McGuire, M. (1998). Multinetwork management: Collaboration and the hollow state in local economic policy. *Journal of Public Administration Research and Theory, 8*(1), 67-91.

Barrilleaux, C., & Berkman, M. (2003). Do governors matter? Budgetary rules and the politics of state policymaking. *Political Research Quarterly, 56*(4), 409-417.

Barth, J., & Ferguson, M. R. (2002). American governors and their constituents: The relationship between gubernatorial personality and public approval. *State Politics & Policy Quarterly, 2*(3), 268-282.

Beck, N., Katz, J. N., & Tucker, R. (1998). Taking time seriously: Time-series cross-section analysis with a binary dependent variable. *American Journal of Political Science, 42*, 1260-1288.

Bennett, D. S. (1999). Parametric models, duration dependence, and time-varying data revisited. *American Journal of Political Science, 43*, 256-270.

Berdahl, R. O. (2004). Strong governors and higher education: A survey and analysis. Retrieved March 8, 2007, from http://www.sheeo.org/govern/gov-home.htm

Berends, M. (1995). Educational stratification and students' social bonding to school. *British Journal of Sociology of Education, 16*(3), 327-351.

Bernick, E. L., & Wiggins, C. W. (1991). Executive-legislator relations: The governor's role as chief legislator. In E. B. Herzik & B. W. Brown (Eds.), *Gubernatorial leadership and state policy* (pp. 73-91). New York: Greenwood Press.

Berry, F. S., & Berry, W. D. (1990). State lottery adoptions as policy innovations: An event history analysis. *The American Political Science Review, 84*, 395-415.

Berry, F. S., & Berry, W. D. (1992). Tax innovation in the states: Capitalizing on political opportunity. *American Journal of Political Science, 34*, 715-742.

Berry, F. S., & Berry, W. D. (2007). Innovation and diffusion models in policy research. In P. Sabatier (Ed.), *Theories of the policy process*. Boulder, CO: Westview Press.

Beyle, T. (1988). The governor as innovator in the federal system. *Publius, 18*(3), 131-152.

Beyle, T. (2004). The governors. In V. Gray & R. R. Hanson (Eds.), *Politics in the American states: A comparative analysis* (Eighth ed., pp. 194-231). Washington, DC: CQ Press.

Boehmke, F. J., & Witmer, R. (2004). Disentangling diffusion: The effects of social learning and economic competition on state policy innovation and expansion. *Political Research Quarterly, 57*(1), 39-51.

Bond, J. R., & Fleisher, R. (1990). *Presidential success in the legislative arena*. Chicago, IL: University of Chicago Press.

Boswell, K. (2000). Building bridges or barriers? Public policies that facilitate or impede linkages between community colleges and local school districts. *New Directions for Community Colleges, 111*, 3-15.

Bound, J., Groen, J., Kezdi, G., & Turner, S. (2001). *Trade in university training: Cross-state variation in the production and use of college-educated labor* (Working paper 8555). Cambridge, MA: National Bureau of Economic Research.

Bowler, M. (2001). Maryland's K-16 partnership. In G. I. Maeroff, P. M. Callan & M. D. Usdan (Eds.), *The learning connection: New partnerships between schools and colleges* (pp. 63-70). New York: Teachers College Press.

Bowling, C. J., & Ferguson, M. R. (2001). Divided government, interest representation, and policy differences: Competing explanations of gridlock in the fifty states. *Journal of Politics, 63*(1), 182-206.

Box-Steffensmeier, J. M., & Jones, B. S. (1997). Time is of the essence: Event history models in political science. *American Journal of Political Science, 41*(4), 1414-1461.

Box-Steffensmeier, J. M., & Jones, B. S. (2004). *Event history modeling : A guide for social scientists*. Cambridge ; New York: Cambridge University Press.

Box-Steffensmeier, J. M., Reiter, D., & Zorn, C. (2003). Nonproportional hazards and event history analysis in international relations. *Journal of Conflict Resolution, 47*(1), 33-53.

Bredesen, P. (2007). Phil's priorities: Education in Tennessee. July 12. Retrieved January 5, 2008, from http://www.tennesseeanytime.org/governor/viewPriorityContent.do?id=1070&page=0

Brubacher, J. S., & Rudy, W. (1997). *Higher education in transition: A history of American colleges and universities*. New Brunswick, NJ: Transaction Publishers.

Buckley, J., & Westerland, C. (2004). Duration dependence, functional forms, and corrected standard errors: Improving EHA models of state policy diffusion. *State Politics & Policy Quarterly, 4*(2), 94-113.

Burke, C. B. (1982). *American collegiate populations: A test of the traditional view*. New York, NY: New York University Press.

Callan, P. M., Finney, J. E., Kirst, M. W., Usdan, M. D., & Venezia, A. (2006). *Claiming common ground: State policymaking for improving college readiness and success* (National Center Report #06-1). San Jose, CA: The National Center for Public Policy and Higher Education.

Chamberlain, R., & Haider-Markel, D. P. (2005). Lien on me: State policy innovation in response to paper terrorism. *Political Research Quarterly, 58*(3), 449-460.

Cheek, S. K. (1990). Recent state intiatives: The governor as policy leader; the governor as chief administrator. *International Journal of Public Administration, 13*(4), 621-644.

Coffey, D. (2005). Measuring gubernatorial ideology: A content analysis of state of the state speeches. *State Politics & Policy Quarterly, 5*(1), 88-103.

Coffey, D. (2006). *Altering perspectives: State economic performance and gubernatorial agendas.* Paper presented at the State Politics and Policy Conference, Lubbock, TX.

Cox, R. (1991). The management role of governor. In E. B. Herzik & B. W. Brown (Eds.), *Gubernatorial leadership and state policy* (pp. 55-72). New York: Greenwood Press.

Dahl, R. A. (1961). *Who governs?* New Haven, CT: Yale University Press.

Dawson, R. E., & Robinson, J. A. (1963). Inter-party competition, economic variables, and welfare policies in the American states. *Journal of Politics, 25*(2), 265-289.

Deaton, R. (2006). *Policy shifts in tuition setting authority in the American states: An event history analysis of state policy adoption* Unpublished doctoral dissertation, Vanderbilt University, Nashville, TN.

DiLeo, D. (1997). Dynamic representation in the American states. *State and Local Government Review, 29*(2), 52-59.

DiLeo, D. (2001). To develop or to redistribute? An analysis of the content of governors' agendas. *State and Local Government Review, 33*(1), 52-59.

DiLeo, D., & Lech, J. C. (1998). Governors' issues: A typology revisited. *Comparative State Politics, 19*(6), 9-20.

Dilger, R. J., Krause, G. A., & Moffett, R. R. (1995). State legislative professionalism and gubernatorial effectiveness, 1978-1991. *Legislative Studies Quarterly, 20*(4), 553-571.

Dometrius, N. C. (2002). Gubernatorial approval and administrative influence. *State Politics & Policy Quarterly, 2*(3), 251-267.

Doyle, W. R. (2006). Adoption of merit-based student grant programs: An event history analysis. *Educational Evaluation and Policy Analysis, 28*(3), 259-285.

Doyle, W. R. (2007). Public opinion, partisan identification, and higher education policy. *Journal Of Higher Education, 78*(4), 369-401.

Doyle, W. R., McLendon, M. K., & Hearn, J. C. (2005). *The adoption of prepaid tuition and savings plans in the American states: An event history analysis.* Paper presented at the Association for the Study of Higher Education (ASHE), Philadelphia, PA

Dye, T. R. (1966). *Politics, economics, and the public: Policy outcomes in the American states*. Chicago, IL: Rand McNally & Company.

Education Commission of the States. (2003). *StateNotes: Models of postsecondary education coordination and governance in the states*. Denver, CO: Education Commission of the States.

Education Commission of the States. (2006). *StateNotes: P-16 collaboration in the states*. Denver, CO.

Education Commission of the States. (2007a). *Recent state policies/ activities: P-16*. Denver, CO.

Education Commission of the States. (2007b). *StateNotes: P-16 (K-16) Structures*. Denver, CO.

Federman, M., & Pachon, H. P. (2005). Addressing institutional inequities in education: The case of Advanced Placement courses in California. In J. Petrovich & A. S. Wells (Eds.), *Bringing equity back: Research for a new era in American educational policy* (pp. 136-156). New York: Teachers College Press.

Ferguson, M. R. (2003). Chief executive success in the legislative arena. *State Politics & Policy Quarterly, 3*(2), 158-182.

Fording, R. C., Woods, N. D., & Prince, D. (2002, May 24-25). *Explaining gubernatorial success in state legislatures.* Paper presented at the Second Annual Conference on State Politics and Policy, University of Wisconsin, Milwaukee.

Fusarelli, L. D. (2002). The political economy of gubernatorial elections: Implications for education policy. *Educational Policy, 16*(1), 139-160.

Gamoran, A., & Berends, M. (1987). The effects of stratification in secondary schools: Synthesis of survey and ethnographic research. *Review of Educational Research, 57*(4), 415-435.

Gittell, M., & Kleiman, N. S. (2000). The political context of higher education. *American Behavioral Scientist, 43*(7), 1058-1091.

Gittell, M., & McKenna, L. (1999). Redefining education regimes and reforms: The political role of governors. *Urban Education, 34*(3), 268-291.

Glenn, C. L. (2002). *The myth of the common school*. Amherst, MA: The University of Massachusetts Press.

Goldsmith, S., & Eggers, W. D. (2004). *Governing by network: The new shape of the public sector*. Washington, DC: Brookings Institution Press.

Gordon, D. T. (Ed.). (2003). *A nation reformed? American education 20 years after A Nation at Risk*. Cambridge, MA: Harvard Education Press.

Grambsch, P. M., & Therneau, T. M. (1994). Proportional hazards tests and diagnostics based on weighted residuals. *Biometrika, 81*(3), 515-526.

Graves, W. (2001). PASS: Oregon's new path to college. In G. I. Maeroff, P. M. Callan & M. D. Usdan (Eds.), *The learning connection: New partnerships between schools and colleges* (pp. 71-77). New York: Teachers College Press.

Gray, V. (1973). Innovation in the states: A diffusion study. *The American Political Science Review, 67*(4), 1174-1185.

Greenberg, A. R. (1991). *High school-college partnerships: Conceptual models, programs, and issues. ASHE-ERIC higher education report, No. 5*. Washington, D.C.: School of Education and Human Development, George Washington University.

Gross, D. A. (1991). The policy role of governors. In E. B. Herzik & B. W. Brown (Eds.), *Gubernatorial leadership and state policy* (pp. 1-24). New York: Greenwood Press.

Grossback, L. J., Nicholson-Crotty, S., & Peterson, D. A. M. (2004). Ideology and learning in policy diffusion. *American Politics Research, 32*(5), 521-545.

Haider-Markel, D. P., & Meier, K. J. (1996). The politics of gay and lesbian rights: Expanding the scope of the conflict. *Journal of Politics, 58*(2), 332-349.

Hall, T. E. (2002). Changes in legislative support for the governor's program over time. *Legislative Studies Quarterly, 27*(1), 107-122.

Hearn, J. C., & Griswold, C. P. (1994). State-level centralization and policy innovation in U.S. postsecondary education *Educational Evaluation and Policy Analysis, 16*(2), 161-190.

Hearn, J. C., Griswold, C. P., & Marine, G. M. (1996). Region, resources, and reason: A contextual analysis of state tuition and student aid policies. *Research in Higher Education, 37*(3), 241-279.

Hearn, J. C., McLendon, M. K., & Mokher, C. G. (2009). Accounting for student success: An empirical analysis of the origins and spread of state student unit-record systems. *Research in Higher Education, 50*(1).

Heinrich, C. J., & Lynn, L. E., Jr. (Eds.). (2000). *Governance and performance: New perspectives*. Washington, DC: Georgetown University Press.

Herrington, C., & Fowler, F. (2003). Rethinking the role of states and educational governance. In W. L. Boyd & D. Miretzky (Eds.), *American educational governance on trial: Changes and challenges* (pp. 271-290). Chicago, IL: The University of Chicago Press.

Herzik, E. B. (1983). Governors and issues: A typology of concerns. *State Government, 56*(2), 58-64.

Herzik, E. B. (1991). Policy agendas and gubernatorial leadership. In E. B. Herzik & B. W. Brown (Eds.), *Gubernatorial leadership and state policy* (pp. 25-38). New York: Greenwood Press.

Hodgkinson, H. L. (1985). *All one system: Demographics of education, Kindergarten through graduate school*. Washington, DC: Institute for Educational Leadership.

Hodgkinson, H. L. (1999). *All one system: A second look. Perspectives in public policy: Connecting higher education and the public schools*. Washington, DC: Institute for Educational Leadership.

Hofferbert, R. I. (1966). The relation between public policy and some structural and environmental variables in the American states. *The American Political Science Review, 60*(1), 73-82.

Hosmer, D. W., & Lemeshow, S. (1999). *Applied survival analysis : regression modeling of time to event data*. New York: Wiley.

Hunter, F. (1953). Community power structure. In W. D. Hawley & F. M. Wirt (Eds.), *The search for community power* (pp. 51-64). Englewood Cliffs, NJ: Prentice-Hall.

Jones, B. S., & Branton, R. P. (2006). Beyond logit and probit: Cox duration models of single, repeating, and competing events for state policy adoption. *State Politics & Policy Quarterly, 5*(4), 420-443.

Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms. *Academy of Management Review, 22*(4), 911-945.

Karch, A. (2007). Emerging issues and future directions in state policy diffusion research. *State Politics & Policy Quarterly, 7*(1), 54-80.

Kettlewell, J. S., Kaste, J. A., & Jones, S. A. (2000). The Georgia story of P-16 partnerships. *Educational Policy, 14*(1), 77-92.

Key, V. O. (1956). *American state politics: An introduction*. New York: Alfred A. Knopf, Inc.

Kingdon, J. W. (1984). *Agendas, alternative, and public policies*. Boston, MA: Little, Brown.

Kirst, M. W. (2005). *Separation of K-12 and postsecondary education governance and policymaking: Evolution and impact* (Report #17): The Bridge Project, Stanford University.

Kirst, M. W., & Bracco, K. R. (2004). Bridging the great divide: How the K-12 and postsecondary split hurts students, and what can be done about it. In M. W. Kirst & A. Venezia (Eds.), *From high school to college: Improving opportunities for success in postsecondary education* (pp. 1-30). San Francisco, CA: Jossey-Bass.

Kirst, M. W., Meister, G., & Rowley, S. R. (1984). Policy issue networks: Their influence on state policymaking. *Policy Studies Journal, 13*, 247-263.

Klopfenstein, K. (2004). Advanced placement: Do minorities have equal opportunity? *Economics of Education Review, 23*, 115-131.

Knott, J., & Payne, A. (2003). The impact of state governance structures on management and performance of public organizations: A study of higher education institutions. *Journal of Policy Analysis and Management, 23*(1), 13-30.

Lowi, T. J. (1964). American business, public policy, case studies, and political theory. *World politics, 16*, 677-715.

Lowry, R. C. (2001). Governmental structure, trustee selection and public university prices and spending: Multiple means to similar ends. *American Journal of Political Science 45*(4), 845.

Lucas, S. R. (1999). *Tracking inequality: Stratification and mobility in American high schools*. New York: Teachers College Press.

Maeroff, G. I., Callan, P. M., & Usdan, M. D. (2001). A relationship waiting to happen. In G. I. Maeroff, P. M. Callan & M. D. Usdan (Eds.), *The learning connection: New partnerships between schools and colleges* (pp. 1-10). New York: Teachers College Press.

Manna, P. (2006). *How governance of K-12 education influences policy outputs and student outcomes in the United States.* Paper presented at the Annual meeting of the American Political Science Association, Philadelphia, PA.

McDermott, K. A. (2003). What causes variation in states' accountability policies? . *Peabody Journal of Education, 78*(4), 153-176.

McGuinness, A. C. (1994). *State postsecondary education structures handbook*. Denver, CO: Education Commission of the States.

McGuinness, A. C. (1997). *State postsecondary education structures handbook*. Denver, CO: Education Commission of the States.

McLendon, M. K. (2003). Setting the governmental agenda for state decentralization of higher education. *The Journal of Higher Education, 74*(5), 479-515.

McLendon, M. K., Deaton, R., & Hearn, J. C. (2007). The enactment of state-level governance reforms for higher education: A test of the political-instability hypothesis. *Journal Of Higher Education*.

McLendon, M. K., Hearn, J. C., & Deaton, R. (2006). Called to account: Analyzing the origins and spread of state performance-accountability policies for higher education. *Educational Evaluation and Policy Analysis, 28*(1), 1-24.

McLendon, M. K., & Heller, D. E. (2003, May 2). *High school to college transition policy: Barrier to conducting cross-state comparative studies.* Paper presented at the Spencer Foundation-sponsored symposium, "Building Capacity for Educational Policy: Barriers to Conducting Cross-State Comparative Studies", Georgia State University, Atlanta, GA.

McLendon, M. K., Heller, D. E., & Young, S. P. (2005). State postsecondary policy innovation: Politics, competition, and the interstate migration of policy ideas. *Journal of Higher Education, 76*(4), 363-400.

McLendon, M. K., & Ness, E. C. (2003). The politics of state higher education governance reform. *Peabody Journal of Education, 78*(4), 66-88.

McNeal, R. S., Tolbert, C. J., Mossberger, K., & Dotterweich, L. J. (2003). Innovating in digital government in the American states. *Social Science Quarterly, 84*(1), 52-70.

Meier, K. J., & O'Toole, L. J., Jr. (2000). Managerial strategies and behavior in networks: A model with evidence from U.S. public education. *Journal of Public Administration Research and Theory, 11*(3), 271-293.

Meyer, J., Scott, W. R., & Strang, D. (1987). Centralization, fragmentation, and school district complexity. *Administrative Science Quarterly, 32*, 186-2001.

Mikesell, J. L. (1978). Election periods and state tax policy cycles. *Public Choice, 33*(3), 99-106.

Mills, C. W. (1956). *The power elite*. New York, NY: Oxford University Press.

Milward, H. B., & Provan, K. G. (1998). Principles for controlling agents: The political economy of network structure. *Journal of Public Administration Research and Theory, 8*(2), 203-221.

Milward, H. B., & Provan, K. G. (2000). How networks are governed. In C. J. Heinrich & L. E. Lynn, Jr. (Eds.), *Governance and performance: New perspectives* (pp. 238-262). Washington, DC: Georgetown University Press.

Mintrom, M. (1997). Policy entrepreneurs and the diffusion of innovation. *American Journal of Political Science, 41*(3), 738-770.

Mintrom, M., & Vergari, S. (1998). Policy networks and innovation diffusion: The case of state education reforms. *Journal of Politics, 60*(1), 126-148.

Moe, T. M. (2003). The politics of the status quo. In P. E. Peterson & J. E. Chubb (Eds.), *Our schools and our future: Are we still at risk?* (pp. 177-210). Stanford, CA: Hoover Institution Press.

Mokher, C. G., & McLendon, M. K. (Forthcoming). Uniting secondary and postsecondary education: An event history analysis of state adoption of dual enrollment policies. *American Journal of Education*.

Mooney, C. Z. (2001). Modeling regional effects on state policy diffusion. *Political Research Quarterly, 54*(1), 103-124.

Mooney, C. Z., & Lee, M.-H. (1995). Legislating morality in the American states: The case of pre-Roe abortion regulation reform. *American Journal of Political Science, 39*(3), 599.

Morehouse, S. M. (1996). Legislative party voting for the governor's program. *Legislative Studies Quarterly, 21*(3), 359-381.

Morest, V. S., & Karp, M. M. (2006). Twice the credit, half the time? The growth of dual credit at community colleges and high schools. In T. R. Bailey & V. S. Morest (Eds.), *Defending the community college equity agenda* (pp. 223-245). Baltimore: The Johns Hopkins University Press.

Mortenson, T. G. (2006). *Chance for college by age 19 by state* (Number 169, February). Oskaloosa, IA: Postsecondary Education Opportunity.

Nelson, M. A. (2000). Electoral cycles and the politics of state tax policy. *Public Finance Review, 28*, 540-560.

Nicholson-Crotty, J., & Meier, K. (2003). Politics, structure, and public policy: The case of higher education. *Educational Policy, 17*(1), 80-97.

Nordhaus, W. D. (1975). The political business cycle. *The Review of Economic Studies, 42*(2), 169-190.

O'Brien, D. M., & Nelson, T. D. (2004). *Strengthening college preparation and access through concurrent enrollment in high school and community college* (Working paper). Dallas, TX: Texas Schools Project, University of Texas at Dallas.

O'Toole, L. J., Jr., & Meier, K. J. (2000). Networks, hierarchies, and public management: Modeling the nonlinearities. In C. J. Heinrich & L. E. Lynn, Jr. (Eds.), *Governance and performance: New perspectives* (pp. 263-291). Washington, DC: Georgetown University Press.

Oakes, J. (1985). *Keeping track: How schools structure inequality*. New Haven: Yale University Press.

Olson, L. (2006). States push to align policies from pre-K to postsecondary. *Education Week, 25*(41), 1,16,19-20.

Powell, W. W. (1990). Neither market nor hierarchy: Network forms of organization. *Research in Organizational Behavior, 12*, 295-336.

Provan, K. G., & Milward, H. B. (1991). Institutional-level norms and organizational involvement in a service-implementation network. *Journal of Public Administration Research and Theory, 1*(4), 391-417.

Renzulli, L. A., & Roscigno, V. J. (2005). Charter school policy, implementation, and diffusion across the United States. *Sociology of Education 78*(4), 344-265.

Riley, B. (2007). Executive Order Number 36. Retrieved January 5, 2008, from http://www.governorpress.alabama.gov/pr/ex-36-2007-10-05.asp

Rincke, J. (2004). Neighborhood effects in the diffusion of policy innovation - Evidence from charter school legislation in the US. Mannheim, Germany: Centre for European Economic Research, Mannheim University.

Rochford, J. A. (2007). *P-16: The last education reform. Emerging local, regional, and state efforts*. Canton, OH: Stark Education Partnership, Inc.

Rogoff, K. (1990). Equilibrium political budget cycles. *The American Economic Review, 80*(1), 21-36.

Rosenthal, A. (1990). *Governors and legislatures: Contending powers*. Washington, DC: Congressional Quarterly Press.

Sabatier, P. A. (1999). The need for better theories. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 3-19). Boulder, CO: Westview Press.

Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The advocacy coalition framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 117-166). Boulder, CO: Westview Press.

Salamon, L. M. (2002). The new governance and the tools of public action: An introduction. In L. M. Salamon (Ed.), *The tools of government: A guide to the new governance* (pp. 1-47). New York: Oxford University Press.

Sharkansky, I. (1967). Government expenditures and public service in the American states. *The American Political Science Review, 61*(4), 1066-1077.

Shipan, C. R., & Volden, C. (2006). Bottom-up federalism: The diffusion of antismoking policies from U.S. cities to states. *American Journal of Political Science, 50*(4), 825-843.

Smith, A. K., & Wohlstetter, P. (2001). Reform through school networks: A new kind of authority and accountability. *Educational policy, 15*(4), 499-519.

Soss, J., Schram, S. F., Vartanian, T. P., & O'Brien, E. (2001). Setting the terms of relief: Explaning state policy choices in the devolution revolution *American Journal of Political Science, 45*(2), 378-395.

Spitzer, R. (1983). *The presidency and public policy*. Tuscaloosa, AL: University of Alabama Press.

Squire, P., & Hamm, K. E. (2005). *101 chambers: Congress, state legislatures, and the future of legislative studies*. Columbus, OH: Ohio State University Press.

Stark Education Partnerships. (2005a). An annotated bibliography of web-based P-16 references and internet sites. Retrieved July 12, 2007, from http://www.edpartner.org/publications.html

Stark Education Partnerships. (2005b). State-level P-16 activities. Retrieved July 12, 2007, from http://www.edpartner.org/pdfs/state_level_p16_activities.pdf

Suggs, E. (2001). Georgia's P-16 initiative. In G. I. Maeroff, P. M. Callan & M. D. Usdan (Eds.), *The learning connection: New partnerships between schools and colleges* (pp. 78-86). New York: Teachers College Press.

Tappan, H. (1851). University Education, reprinted in In R. Hofstadter & W. Smith (Eds.), *American higher education: A documentary history (1961)*. Chicago, IL: University of Chicago Press.

Teranishi, R., Allen, W. R., & Solorzano, D. G. (2004). Opportunity at the crossroads: Racial inequality, school segregation, and higher education in California. *Teachers College Record, 106*(11), 2224-2245.

Thelin, J. R. (2004). *A history of American higher education*. Baltimore, MD: Johns Hopkins University Press.

Therneau, T. M., & Grambsch, P. M. (2001). *Modeling survival data: Extending the Cox model*. New York, NY: Springer.

Toma, E. F. (1986). State university boards of trustees: A principal-agent perspective. *Public Choice, 49*, 155-163.

Truman, D. (1951). *The governmental process*. New York, NY: Knopf.

Tucker, M. S. (2004). High school and beyond: The system is the problem - and the solution. In R. Kazis, J. Vargas & N. Hoffman (Eds.), *Double the numbers: Increasing postsecondary credentials for underrepresented youth* (pp. 47-60). Cambridge, MA: Harvard Education Press.

Turner, C. S. V., Jones, L. M., & Hearn, J. C. (2004). Georgia's P-16 reforms and the promise of a seamless system. In M. W. Kirst & A. Venezia (Eds.), *From high school to college: Improving opportunities for success in postsecondary education* (pp. 183-219). San Francisco, CA: Jossey Bass.

Van Assendelft, L. A. (1997). *Governors, agenda setting, and divided government*. Lanham, MD: University Press of America.

Venezia, A., Callan, P. M., Finney, J. E., Kirst, M. W., & Usdan, M. D. (2005). *The governance divide: A report on a four-state study on improving college readiness and success* (National Center Report #05-3). San Jose, CA: The National Center for Public Policy and Higher Education.

Venezia, A., Callan, P. M., Kirst, M. W., & Usdan, M. D. (2006). *The governance divide: The case study for Georgia*. San Jose, CA: The National Center for Public Policy and Higher Education.

Venezia, A., & Kirst, M. W. (2005). Inequitable opportunities: How current education systems and policies undermine the chances for student persistence and success in college. *Educational Policy, 19*(2), 283-307.

Venezia, A., Kirst, M. W., & Usdan, M. D. (2006). *The governance divide: The case study for New York*. San Jose, CA: The National Center for Public Policy and Higher Education.

Walker, J. L. (1969). The diffusion of innovations among the American states. *The American Political Science Review, 63*(3), 880-899.

Warren, J. R., & Kulick, R. (2007). Modeling states' enactment of high school exit examination policies. *Social Forces, 86*, 215-230.

Wong, K. K., & Langevin, W. E. (2005). The diffusion of governance reform in American public education: An event history analysis of state takeover and charter school laws (Vol. 2005): National Center on School Choice.

Wong, K. K., & Shen, F. X. (2002). Politics of state-led reform in education: Market competition and electoral dynamics. *Educational Policy, 16*(1), 161-192.

Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. Cambridge, Mass.: MIT Press.

Yamaguchi, K. (1991). *Event history analysis*. Newbury Park: Sage.