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Meghan Theresa Dunne
College of William and Mary

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**Federal Principals, State Agents, and Teacher Quality:
Factors affecting state implementation of No Child Left Behind's Highly Qualified Teacher
provision.**

A thesis submitted in partial fulfillment of the requirement
for the degree of Bachelors of Arts in Public Policy from
The College of William and Mary

by

Meghan Theresa Dunne

Accepted for _____
(Honors)

Professor Paul Manna, Director

Professor Chris Howard

Professor Melissa McInerney

Williamsburg, VA
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Chapter 1: Introduction

In a commentary for National Public Radio, education policy expert Andrew Rotherham made a series of suggestions to President-Elect Barack Obama. "...Improve federal programs designed to produce better teachers. The \$3 billion the government spends on this now is largely ineffective" (2008). A new administration provides the opportunity to implement new ideas and redesign old ones. It demands questioning of the way programs have been run in the past, and the way they have been funded. It prompts us to ask, in a time of economic crisis, why is the government spending \$3 billion on a program that inspires such criticism? What is this current program and what is making its critics accuse it of being ineffective?

While traditionally a responsibility of the state governments, the field of education has felt an increasingly strong influence of the federal government over the past 50 years. In fact, since the passage of the Elementary and Secondary Education Act (ESEA) in 1965, federal education policy has expanded its reach into state legislation. The No Child Left Behind Act of 2001 (NCLB) is the most recent version of the ESEA, and the most recent attempt at federal education programming. Despite having evolved from ESEA, NCLB has been recognized as extending the federal government's hand even deeper into education policy. NCLB, with a focus on stronger accountability for results, made many changes to already existing federal education policies. One of the largest changes can be seen in the area of teacher policy. While federal regulation of teacher policy had existed in the past, mainly under the Eisenhower Professional Development Program, NCLB's provision on Highly Qualified Teachers expanded this regulation.

This thesis will focus on NCLB's provision on Highly Qualified Teachers, specifically the state's plan for implementation of the law. According to NCLB, a highly qualified teacher is one who holds a bachelor's degree, is state certified, and demonstrates competency in the core academic subject or subjects he or she teaches (PL107-110). The federal law defines Highly Qualified Teachers (HQTs¹) with intentional ambiguity, leaving the states with a large license to determine what they define as the requirements to become a Highly Qualified Teacher (Hess et al, 2004). There are many studies that examine how states have implemented this provision, and the differences that exist between those implementations (Walsh and Snyder 2004, Education Trust 2008, Center on Education Policy 2007, NCTQ 2007, Blank 2003). Overall, these studies agree that the idea of flexibility championed by NCLB has allowed states too much power in determining their teacher policies. State's teacher policies do not reflect the ideal as designed by the federal government, and vary greatly between one another.

However, no study explains *why* such drastic differences occur from state to state. Thus, this project asks why has the effect of federal teacher policy been felt so differently by each state? Specifically, the research will look at the effects of 4 independent variables on each state's response: The presence of teacher unions, the partisanship of state legislatures and governors, the state certification policy before NCLB, and capacities of state data systems before NCLB.

The relationship between the federal government and state governments is a complicated one. Beyond laying out a standard for high quality from which the states must determine their own requirements, the federal government delegates authority

¹ When referring to the Highly Qualified Teacher provisions of NCLB this thesis will use "HQT" provisions. When referring to specific teachers, the abbreviation will not be used.

through the use of grant programs. These programs are truly the center of the law, leaving federal oversight with much to achieve (Manna 2007). While NCLB is a reauthorization of the ESEA, there was no equivalent of the HQT provisions in past versions of this law. Because there was nothing in the ESEA comparable to the HQT requirements, no existing staff had been assigned to issues concerning these requirements. After NCLB was signed, the Department assigned the responsibility for the HQT provisions to the Title II, Part A staff rather than to the Title I staff. While the HQT provisions are technically located in Title I, it made sense to look at HQT in conjunction with the funding stream (IIA) that had the most funds available for professional development.

The Title II, Part A program in NCLB was a large departure from the previous Eisenhower Professional Development Program², as the Eisenhower allocations were considerably smaller than what is currently available under IIA. Because the Eisenhower Professional Development Program was relatively small, the federal staff assigned to administer it was also small, at only 2 people (Witt 2008). Initially, no additional staff were assigned to HQT. It was not until mid-2004 that the Department started to monitor the HQT provisions, and at that point it became clear that the Department would have to increase staffing for the program. Since then, the Department has been able to maintain 4-6 people who work at least part of the time on HQT and IIA. This change in staffing reflects the lack of initial attention the Department paid to the provisions.

The relationship between the federal government and the states is an example of a relationship between a principal and an agent. In a Principal-Agent relationship the

² The Eisenhower Professional Development Program was Title II of the ESEA, and a federal program focused on the development of the knowledge and skills of classroom teachers (Department of Education, 1999).

principal has formal authority however, it focuses on the authority to impose incentives on the agent. The agent has an informational advantage over the principal, and actually takes the actions that impact the outcomes for both players (Miller 2005, Bendor, Glazer, & Hammond 2001). In this case, the federal government acts as the principal, delegating authority and incentive (through grants) to the states, or agents. As we have seen in the staffing of the Department and will see in the review of the existing literature, the initial relationship between the federal government and the states in this situation was extremely tenuous.

Principal-Agent theory suggests that with increased distance between the principal and the agent, there is room for other factors to influence the agent's interpretation of the principal's demand. In order to account for this space for influence, this thesis proposes four independent variables that are expected to affect state implementation according to existing logic and theories: union presence in each state, party affiliation of the state's governor and party majority in state legislatures, the starting points of state teacher policy before NCLB, and the data capabilities of each state.

In order to carry out these studies, I will be using a variety of sources. The data I will be using to construct my dependent variable, how closely each state's revised plan for teacher quality aligns with the federal government's policy, will come from the comments provided by the Department of Education on each state's plan for teacher quality. The Department reviewed each plan with the same rubric, looking specifically for 6 requirements. Compiling the reviews of each state into one data set, I am able to create an additive index, assigning each state a score based on how complete its plan is.

I define union presence as the number of teacher unions' members per 100 state

residents, and consider the effect of a state government being unified through having a Democratic governor and a Democratic majority in both bodies of the state legislature. To determine state starting points, I will consider whether or not each state had certification policies that required subject matter testing before these standards were passed. Finally I quantify a state's data capabilities by the presence or absence of a unique teacher identifier. The data and methods chapter will explain these measures in greater depth, as well as discuss their expected effects.

The analysis of these measures provides interesting findings. Where I hypothesize that all proposed independent variables will predict a portion of the variance in the dependent variable, the regression equations lack statistical support for this expectation. In fact, only one of the proposed independent variables seems to play a significant role in explaining how many pieces of evidence states will present in their revised state plans for HQTs. This finding, however, builds off of numerous analyses of the independent variables on their own.

To provide a clear path to these findings, I will first review the literature that exists on my topic. Next I will further explore the theories that inform my hypotheses. In order to test my hypotheses, I will then explain the data that will inform my analysis and the methodology that dictates these results. I then discuss the effects of each independent variable on state plans for improving teacher quality, ultimately providing a holistic view of the factors that influence state implementation. Finally I will address the potential limitations of my project, and suggest topics for future research. First, however, it is crucial to identify the work that has already been done in this field, and present the gap that my research will fill.

Chapter 2: The Federal-State Relationship

Introduction

While there is agreement among researchers that implementation of the HQT provision is extremely varied across states, no study exists explaining *why* such drastic differences occur. Theories of Principal-Agent relationships allow us to set up a puzzle that attempts to fill this void. The relationship between the federal government and the states is an example of a relationship between a principal and an agent. The federal government provides states with money to carry out the Highly Qualified Teacher provision; by accepting the money from the federal government the states become agents to this federal principal. Principal-Agent theory suggests that with increased distance between the principal and the agent, there is more room for influence by other factors. Studies have already concluded that there are only tenuous ties between the federal government and the state's implementation of this provision, and many organizations have criticized the federal government for providing little attention to the HQT section of NCLB. Therefore, by applying theories of Principal-Agent relationships to the state implementation of the HQT provisions, I expect that there will be "other factors" that influence implementation

I will test the influence of four independent variables on state implementation of this law: union presence in each state, party affiliation of the state's governor and party majority in state legislatures, starting points of state teacher policy before the passage of NCLB, and the data capabilities of each state. This project uses theories of principal agent relationships to test the effects of these variables on planned state implementation of this law, asking *What factors influence state implementation of federal teacher policy?*

To provide a clear path to these findings, this section will review the legislative history of NCLB, building a foundation for the following research. Next, I will explain the existing literature surrounding the HQT provisions. After providing a comprehensive review of this existing research, I will further explore the theories that inform my hypotheses. The subsequent sections describe the data and methodology, present the findings, and discuss the implications of these findings.

Legislative History: NCLB's Highly Qualified Teacher Provision

NCLB, the most recent reauthorization of the Elementary and Secondary Education act, was passed by Congress in 2001 and signed into law by President Bush in 2002. The Department of Education states that the law is based on “stronger accountability for results, more freedom for states and communities, proven education methods, and more choices for parents” (Department of Education Website, Four Pillars of NCLB 2008). These four pillars of the law support all of the initiatives, including everything from monitoring academic yearly progress of schools to the federal standard for highly qualified teachers.

The law defines a highly qualified teacher as one who 1) holds at least a bachelor's degree, 2) has full state certification as a teacher or has passed the state licensure exam and holds a license to teach, and 3) demonstrates competence in each academic subject in which the teacher teaches (PL107-110). NCLB originally required all teachers in core academic subjects to be highly qualified by the 2005-2006 school year, however the federal government, for reasons discussed more in the following sections, further extended the deadline for 100 percent of all teachers to be highly qualified.

In 2006 the federal government asked that all states submit revised state plans, outlining how the states and local education agencies will work towards aligning their teacher policies with the federal design for highly qualified teachers. They were, explicitly, asked to address the following specific points (Spellings 2005).

1. The revised plan must provide a detailed analysis of the core academic subject classes in the State that are currently *not* being taught by highly qualified teachers
2. The revised plan must provide information on HQT [Highly Qualified Teacher] status in each LEA [Local education agency³] and the steps the SEA [state education agency] will take to ensure that each LEA has plans in place to assist teachers who are not highly qualified to attain HQT status as quickly as possible.
3. The revised plan must include information on the technical assistance, programs, and services that the SEA will offer to assist LEAs in successfully completing their HQT plans.
4. The revised plan must describe how the SEA will work with LEAs that fail to reach the 100 percent HQT goal by the end of the 2006-07 school year.
5. The revised plan must explain the state's use of HOUSSE [High Objective Uniform State Standard of Evaluation⁴] procedures, and how the state plans on limited the use of these procedures after 2006.
6. The revised plan must include a copy of the State's written "equity plan" for ensuring that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children.

The Department of Education established a panel of 31 experts and charged them with identifying where the plans addressed the required points. This panel reviewed the plans and decided if each "sufficiently met," "partially met," or "not sufficiently met" the federal guidelines. For each guideline or requirement, there were pieces of evidence⁵ that the reviewers looked for in each plan to determine if the requirement was met. After the

³ Local Education Agencies are basically local school districts.

⁴ HOUSSE procedures offer an alternative way for teachers already in the field to demonstrate subject matter competency.

⁵ The pieces of evidence considered within each requirement are also referred to as supporting items throughout this thesis.

review, the Department of Education issued a press release explaining that 9 states sufficiently addressed the 6 criteria the peers used in the review, 39 states partially met the requirements, and 4 states did not sufficiently meet any of criteria outlined by the reviewers (Department of Education, August 2006). It is the information from these reviews that will inform my dependent variable, which will be described in more detail in the data and methods section.

Beyond the collection of these plans, the federal government provided additional follow-up with how the grant money from Title II was being used. The federal government is extremely clear in how it wants the grants to be used, providing a list of proper uses of the grant money: Recruiting and retaining highly qualified teachers, offering professional development in core academic area, promoting growth and rewarding quality teaching through mentoring, induction and other support services, testing teachers in academic areas, and reducing class size (Department of Education 2008). The findings from a Department of Education study that surveyed a representative sample of those districts receiving Title II funds demonstrated that the large majority of the funds are being spent on professional development, with the rest of the money being directed towards other initiatives. However, two recommended targets for funding receive no financial support: Recruiting and retaining highly qualified teachers, and testing teachers in academic areas (Department of Education 2008). These two options directly align with what the federal government defines as a highly qualified teacher, so it makes little sense that they are underfunded.

Beyond the Department of Education's analysis of where funds are actually being spent, it is important to consider if the funds, regardless of *where* they are being spent,

are persuading states to implement state teacher policies that align with what the federal government has recommended. The published comments on each state's reviewed plan sheds light on this area, as do a number of additional studies that assess state progress in implementing the HQT provision (Walsh and Snyder 2004, Education Trust 2003, Center on Education Policy 2007, NCTQ 2007, Blank 2003). These reports are a comprehensive analysis of what each state has done in response to the HQT provision of NCLB, summarizing where each state stands on its path to ensuring that 100 percent of its teachers are highly qualified. The findings in these reports are not based on the 6 standards prescribed by the federal government, but instead based on evaluations designed by the authors and foundations that produced these reports. Despite the variation in what each report considers as indicators of progress, the conclusions are often very similar: there are huge variations across the states in the progress and changes that are being made.

Federal-State Dynamic

In an effort to understand the variations in state implementation, this thesis will analyze the relationship between states and the federal government as a principal-agent relationship. With flexibility championed as one of the tenets of NCLB, the federal government places a lot of trust in the states to optimally interpret and implement the law. While the federal government may pass legislation to increase its involvement in education policy, the fact remains that the success of the law relies heavily upon state actions. In the context of grant programs such as the HQT provision this paper considers, this relationship is best described through the lens of principal-agent theory.

The federal government delegates authority (the authority of interpretation,

adaptation and implementation) to the state governments. Principal-agent theory explains that in this situation, the federal government acts as the principal, delegating authority and incentive (through grants) to the states, or agents. A theory of delegation, principal-agent theory assumes a relationship characterized by information asymmetry. The principal has formal authority, however it focuses on the authority to impose incentives on the agent who actually takes the actions that impact the outcomes for both players (Miller 2005, Bendor, Glazer, & Hammond 2001).

Working much closer with the local education agencies, where the teachers and students who are feeling the effects of these policies exist, states have an informational advantage over the federal government. Unlike the Department of Agriculture or Social Security Administration, the Department of Education lacks field offices that would give it opportunity to observe and interact more with agencies outside of Washington. Therefore, states not only have more information about the areas in which the federal law is being implemented, they are ultimately the players who will ensure the law is carried out. While the federal government has formal authority over the situation, it decides to focus on inspiring collaboration by providing incentives to the states, through grant money and flexibility in implementation. Using principal-agent theory to study federal programs is a common practice, and predicts that we will see common patterns in these relationships⁶. The grant programs are meant to persuade states to carry out the goals of the federal government, despite the distance of the federal government from this implementation.

⁶ For additional work on Principal-agent theory and federal grants please see the following resources: Chubb, 1985, Erpenbach, Fast, and Potts 2003, Manna 2006, and Bendor, Glazer, and Hammond 2001.

Do these grants work? Is the money provided actually persuading states to carry out the goals of the federal government? These questions get at the larger inquiry as to the nature of this specific principal-agent relationship. The research suggests that the agent is inclined to act in its own self interest. The principal, however, can influence the actions of the agent if their relationship is close. How close is the relationship between the state governments and the federal government? A number of studies answer this question indirectly, by looking at the progress states are making in achieving the federal government's mandate of having 100 % highly qualified teachers.

The Education Trust (2003) published a report examining each state's response to the 2001 Department of Education's request for a state report on what steps were being taken to ensure all teachers were highly qualified. The response from states was extremely varied, with some states providing ample and appropriate data, and others not reporting any data. This variation in data reporting is echoed in other reports, such as Education Week's Quality Counts (2003) and the General Accounting Office's (2003, 2) report on each state's progress in teacher quality.

GAO could not develop reliable data on the number of highly qualified teachers because states did not have the information needed to determine whether all teachers met the criteria. Officials from 8 states visited said they did not have the information they needed to develop methods to evaluate current teachers' subject area knowledge and the criteria for some teachers were not issued until December 2002. Officials from 7 of 8 states visited said they did not have data systems that could track teacher qualifications for each core subject they teach.

Clear and complete reporting of data is crucial for a couple of reasons. First, the federal government will have no means with which to monitor the progress and direction of states. Here, again, we see the presence of imperfect information as characterized in

most principal-agent relationships. Without a way to monitor state progress, the linkages between the principal and the agent are made increasingly weak. Second, clear data reporting is important for student achievement. Parents and students need to be alerted when teachers in their schools are not considered highly qualified, and while this does not exactly affect the relationship in consideration it is an important point.

Without states reporting proper data, there was no way to monitor how the states were actually implementing the law, and as a result the federal government was forced to ask the states to revise their plans. This initial complexity in the states implementation of the HQT provision suggests that the relationship between the federal and state governments is quite tenuous. The federal government, as a principal, expected its agent to properly carry out its provision. The fact that the federal government, when attempting to monitor the state or agent progress in this task, was unable to do so, suggests that the states are operating in their own interests instead of in the interests of their agent.

Besides lacking the accountability that comes with proper data collection and reporting, there are other areas of the existing research that suggest the relationship between the Department of Education and the states is weak. Many reports discuss the changing role of federal enforcement since the inception of NCLB. Most research attributes the need to extend the deadlines of to a lack of federal enforcement. “Given the lack of enforcement ... the Department probably had no choice but to give states more time to meet the original requirements” (McClure, Piché and Taylor 2006, 18). The study done by Loeb and Miller (2006) makes similar conclusions, asserting that with the focus on accountability and testing, there was little attention paid to the HQT provisions after the law was first signed into effect. The weak link between the federal government

and the states demonstrates a weak link between a principal and an agent. With tenuous relations between these two parties, state governments are more susceptible to influence by other conditions.

Possible Explanations

The remainder of this thesis will be devoted to examining four conditions that may influence state implementation when the relationship between the federal government and the states is weak. My hypotheses are built from the idea that when there is a weak principal agent relationship, the agent is susceptible to influence from conditions beyond the principal. I argue that union presence, partisanship of the state's governor and legislators, starting points of state teacher policy before the passage of NCLB, and data capabilities of each state will influence this implementation. I chose to analyze the effects of these four variables based on various theories that link their presence to effects on policy. In each of the following sections I will describe the reason why I chose the variable and relevant literature that lead me to hypothesize about its effect on state implementation of the HQT provision of NCLB.

Presence of teacher unions

A large body of literature focuses on interest groups as those who are truly responsible for introducing the positions later enacted by politicians (Moe 1989). Because of this claimed influence, I have chosen to test the effect of interest groups in education policy. This literature provides a stronger base for understanding political and structural choices, and provides a hypothesis as to why state implementation of the HQT provision of NCLB falls short of the stated federal goals. Dominant group politics, in

particular, recognizes the strength of the coalition looking to address a specific issue through political change. Unlike elected officials, the dominant group faces no political obstacles, and can focus solely on the structures that will allow for their policy goals (Moe 1989).

These ideas play an important role in the consideration of teacher unions and the implementation of federal policy at the state level. While states are able to implement federal laws in a way that fits with their interests as much as possible, the law they are implementing still comes from their principal. Interest groups face no such oversight, and are able to act in a manner that is- appropriately- in their interest, only (Browne 1998).

In the field of education, especially on state and local levels, teacher unions are the most influential interest group. The two largest teacher unions, the National Education Association (NEA) and the American Federation of Teachers (AFT⁷), hold substantial power across the country and in all levels of education policy. At the state level, education bureaucracies are responsive to the pressure exerted by teacher unions. Some state teacher standard boards actually give teacher unions a role in formulating teacher policies, with many seats on the board occupied by union members. While most assume that state officials can regulate the demands of interest groups, they are “often constrained by the very interests they should be regulating” (Rotherham and Mead 2004, 40)

Locally, these teacher unions have a huge presence. With members working in all school districts across the country, teacher unions seem to be well positioned to advance their agendas in all channels of education policy, from legislation to implementation.

⁷ This research will only consider NEA membership counts. For a full explanation of this decision, see the Union section within the Data and Methods chapter.

The NEA and AFT have some diverging ideas regarding NCLB, and the policy changes it has inspired, however both groups have remained active in the discussion and critique of this law. Offering comments on the law as a general piece of legislation, unions are also making sure to exercise influence in the realm of teacher policy. “Because the law delegates to the states discretion over certain aspects of teacher quality, union advocates have remained active in several policy venues to prevent regulatory and other actions from undermining their priorities” (Manna 2006, 168). In considering these factors, Hypothesis 1 states that the state’s success in presenting each piece of evidence in the plan for implementation of this federal law will be greatly influenced by the interests of the NEA and that states with stronger NEA presence will be more impacted by the interests of the NEA.

Partisanship of State Governor and State Legislators

I expect that the partisanship of the governor and state legislatures will influence the state implementation of this federal policy. There is a large amount of research done on voting along party lines, and the ideas of issue ownership (Petrocik 1996). These bodies of research suggest that party cohesion improves overall policy outcomes for elected officials. In many cases elected officials will vote along their party lines, even if these party lines do not correlate precisely with the individual’s interests or those interests of their constituency. This concept, which has been termed “logrolling,” helps the entire party in the long run (Smith 2007).

This trend of “logrolling” suggests that if both bodies of a state legislature and the governor are dictated by the same party ideals, there will be less need for political compromise in the implementation of policy. Therefore, my hypothesis states that those

governments that are unified in party composition will more successfully implement this federal provision. The logic driving this hypothesis is that states with unified government will not need to compromise as often, since parties have clear party cohesion. However, it is important to consider the distinctions between the parties, to distinguish between being unified in Democratic control and being unified in Republican control.

Theories of issue ownership have traditionally been applied to studies of presidential campaigns; however, the tenets of these argument apply here as well (Petrocik 1996). Democrats believe that a strong government provides needed services and remedies inequalities. Therefore Democrats have often called for greater federal regulation and also advocated for greater federal spending. Unlike the Democrats, Republicans are in support of decreased federal intervention and regulation (Hershey 2009). When applying these stances to the policy being considered, it is only fitting that Democrats would be more likely to support this federal standard of a highly qualified teacher.

Based on these two considerations, I can form two hypotheses about the effects of partisanship on the state implementation of this policy. Hypothesis 2 states that those states that are unified in Democratic control will present more pieces of evidence in their state plans than those states that are not unified in Democratic control. Hypothesis 3 states that those states that are unified in Democratic control will also be more likely to present *each* piece of evidence than those states that are not.

State Starting Points

With a weak relationship between the federal and state governments, I expect that the starting point of each state's teacher policies will influence its implementation of the

HQT provisions of NCLB. The reasoning behind this hypothesis comes from the natural advantage states with advanced teacher policies before NCLB had over other states. Instead of completely reconsidering each program that needs change and starting fresh policy makers consider their starting point and make incremental alterations to their current behavior. People are often wary about making large changes, so by allowing changes to happen slowly and bit by bit, this theory allows for adaptation (Kingdon 1984; Lindblom 1959).

Ideas of incrementalism predict that federal policy will not have a large effect on how states govern the teaching profession. Any changes that are made at the state level will be small, incremental changes that build on whatever teacher policies were in place before the federal intervention. Therefore, I expect that those states with existing teacher policies that start out similar to the demands of the federal policy, will be more aligned with the federal policy at this point.

Based on these concerns, I can form my hypothesis about the effects of state starting points on the state implementation of this policy. Hypothesis 4 states that those states that had subject matter testing as an aspect of their teacher certification pre-NCLB will present more pieces of evidence in their state plans than those states that did not require subject matter testing.

Data capacities

With advances in technology and the passage of the standards based NCLB Act, the provision of quality education data is a topic that has been brought to the forefront of the debate on education reform. Emerging technologies are changing the face of education data, allowing for the facilitation of collection, organization and distribution.

Likewise, many aspects of NCLB depend on state reported data, and as a result has “led to important strides in the quantity, timeliness and potential uses of pupil (and school, subgroup, district, and state) achievement data” (Kanstoroom, Muller, Osberg 2008, xii). As a principal, the federal government is only able to observe the output of its agent through the data that the agent puts forth. Since the relationship between this principal and agent is weak and connections are limited, the dependence on data production is strong. Because of the need to acquire data from its agent, the federal government makes data collection a key aspect of NCLB. The HQT provision is a section of NCLB that relies on timely and accurate state data, asking states to report data on all of their teachers, and how many classrooms are taught by a highly qualified teacher.

While this request for data is made by the principal, not all agents are able to respond appropriately. In fact, history shows that not all states did respond appropriately. The lack of usable data was the reason for extending the initial deadline for all states to have 100 percent highly qualified teachers (Loeb and Miller 2006). States take many different approaches towards data collection, and as a result, are greatly dispersed across the spectrum of quality education data. Some states have more of a capacity to report accurate data than others. Here, capacity refers to not only financial ability, but human and organizational resources as well (Manna 2008). Because a successful implementation of this policy requires fulfilling all of the data reporting requirements, I have created 2 more hypotheses that deal specifically with this independent variable. Hypothesis 5 states that state data capacity will influence its ability to successfully implement this federal mandate. Hypothesis 6 states that state data capacity will influence the presentation of certain specific supporting items within the plan.

Conclusion

Combing through the existing literature on NCLB's HQT provision clearly highlights the gaps that exist in explaining why states have such different plans to implement this provision. There are copious resources that analyze each state's teacher policies; each display the varied progress in implementation across states, but no report discusses *why* these differences occur. In the next chapter I will outline the methodology for my research, describing the data and processes that will help fill these gaps.

Chapter 3: Data and Methods

Introduction

This chapter further defines the data and methods through which I will test my hypotheses. My overall hypothesis states that because of the weak relationship between the federal government and the states, other factors beyond the interests of the federal government will influence state implementation of the HQT provisions. In order to actually test this hypothesis, my research takes the form of a large-N study, considering the plans of all 50 states. It is important that this research studies all 50 states because all existing literature on the implementation of the HQT provisions operates on this scale as well. By providing a comprehensive analysis of the plans for implementation across the United States, this large-N analysis will help to explain the relationship between the principal federal government, and all 50 of its “agents.” The remainder of this chapter will discuss how I operationalize my dependent and independent variables and will re-state each of my 6 specific hypotheses. It will explain how the planned analyses will allow me to first study the individual effect of each independent variable, and then determine the true effect of each variable while holding the others constant. All statistical analyses are computed with the use of SPSS software.

Dependent variable

The dependent variable in my research is the state implementation of the HQT provisions. As discussed in the section reviewing the legislation, After reviewing state *2004-05 HQT data via Part I of the Consolidated State Performance Report*, in early 2006, the Department of Education notified all states that they would need to submit a revised HQT state plan by July 7, 2006 (Department of Education 2006). The

Department of Education was very specific in outlining what these plans should include, and how it would be evaluating them. As listed previously in this thesis, the Department of Education outlined 6 specific requirements that it would use to evaluate each state plan. Each requirement was further specified through the provision of evidence that the Department would be looking for, in order to justify whether or not each requirement was met.

After reviewing the state plans, the Department published its comments on each state's plan on its website. For each state, a standard document addresses the 6 requirements, clearly designating each requirement as "Met," "Partially Met," or "Not Met." Within each requirement there is a list of pieces of evidence, or supporting items, that the Department looked for to make its decisions. States could have either had these supporting items present in their plans, or not⁸. In order to transform this information into a form that would allow for the side by side analysis of all states, I created a coding system to document these reports. For each state, I went through the reviewed plan and entered the information into a database. For each piece of evidence, or supporting item, considered by the Department, I recorded whether or not it was presented in the plan. If the evidence the Department asked for was present, the state received a 1, and if the evidence was not present, the state received a 0. If there was a requirement that was identified as "undecided," I also gave the state a score of 0.

While the Department issued a press release explaining that 9 states sufficiently addressed the 6 criteria the peers used in the review, 39 states partially met the requirements, and 4 states did not sufficiently meet any of criteria outlined by the peers,

⁸ An example of the Department's completed rubric for Alabama's Revised State Plan is included in the appendix. Note the indication of overall acceptance as well as the indication of the presence of evidence.

this data base allows for a more comprehensive analysis of which requirements were and were not met, and which evidence was most frequently missing from these plans (Department of Education 2006). The number of supporting items presented in each plan is my dependent variable. This measure supports the previously mentioned studies that demonstrate the great variance in implementation of the HQT provision. I am able to use the measure for each piece of evidence independently, or I can total the scores for each state and use the data in that form.

My overall hypothesis states that these dependent variables, the state's success presenting each piece of evidence in the plan for implementation of this federal law, will be greatly influenced by other factors such as state teacher policy in 2001, the presence of unions in each state, party membership of elected state officials, and data capabilities of each state. The rest of this chapter will further define each of these independent variables, and discuss the data used to operationalize them. Finally I will re-state the specific hypotheses for each independent variable, explaining how the expected relationship will present itself in my data.

Independent variables

Union Presence

As stated in my theory chapter, theories of structural choice drove my selection of union presence as an independent variable. Hypothesis 1 states that the state's success in presenting each piece of evidence in the plan for implementation of this federal law will be greatly influenced by the interests of the NEA and that states with stronger NEA presence will be more impacted by the interests of the NEA. In order to measure this,

there needs to be a measure of NEA strength. To create this measure, which serves as my independent variable, I established a measure of NEA presence in each state. I was able to locate the NEA membership counts in the NEA Handbook for 2006 (National Education Association 2006), as well as each state's estimated population in 2006 (Census Bureau 2006). Using the NEA membership counts for each state, and the Census bureau's state population counts, I created a measure of NEA members/1000 state residents. Both of these data sources are for the year 2006, to remain consistent with the data provided by the Department. Since the revised plans were requested, written, and reviewed in 2006, it makes sense that the measure of NEA strength come from the same year. For the remainder of this paper I will refer to this independent variable as NEA presence.

While the NEA is the most prominent teacher union in the United States, it is not the only one. As mentioned in the second chapter, the AFT is another teacher union with high membership. I was able to gather state membership counts for about half of the states from the Department of Labor's website. The rest of the states were either missing this data, or had no active chapters. I ran correlation tests between the states that did have report counts and the data I collected for the NEA. The correlation did not prove statistically significant, however this is probably due to the fact that, unlike the NEA, the AFT offers membership to professionals besides teachers. These other professionals include paraprofessionals and school-related personnel (PSRP), local, state and federal employees, higher education faculty and staff, and nurses and other healthcare professionals (AFT website 2009). Because membership counts do not distinguish the

breakdown of professionals, the NEA membership counts are a superior method of measuring teacher union strength in each state.

This research begs many questions of the relationship between NEA strength and the submitted state plans for HQTs. The NEA is very clear in its consideration of NCLB as a complete piece of legislation. Criticizing the law since its inception, the NEA denounces NCLB and calls for a complete overhaul (Koppich 2005). When specifically referring to teacher policy, the NEA opposes the federal government defining who qualifies as a highly qualified teacher. (National Education Association 2006). However, in order to test for the influence of the NEA, I had to identify the organization's opinions on each of the requirements specifically.

There was not a clear stated opinion regarding each piece of evidence asked for in the state plans, so I researched NEA documents, reports, and statements in an effort to make connections between their stances and the substance of each piece of evidence. There are some pieces of evidence that I was unable to connect to NEA stances, so my analysis was limited to 22 of the 25 required pieces of evidence. Table 1 depicts each piece of evidence and whether the NEA is in support, opposition, or neutral to each specific piece of evidence. Those coded as neutral are the pieces of evidence that I could not locate support for, or opposition against.

Table 1. NEA Stances on Each Piece of Evidence Required in Revised Plans

Requirement from State Plan	NEA Stance	Reasons for Classification
Req 1C: Identify particular groups of teachers to which the State’s plan must pay particular attention?	Support	“Hard-to-staff schools, especially those with high concentrations of disadvantaged students or those that have consistently struggled to meet student achievement targets, need significant supports and resources, including additional targeted funding to attract and retain quality teachers, and induction programs with intensive mentoring components that will help teachers become successful. A reauthorized ESEA should exclude any provision linking student test scores to teacher compensation.” – NEA website
Req 3B: plan indicates that the staffing and professional development needs of schools that are not making AYP will be given high priority?	Support	See 1C
Req 3D: address the needs of any subgroups of teachers identified in Requirement 1?	Support	See 1C
Req 5A: describe how and when the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year	Support	“Maintain the High Objective Uniform State Standard of Evaluation (HOUSSE) as a method for veteran teachers to meet the highly qualified requirement.” -NEA website
Req 6A: include a written equity plan	Support	“A reauthorized ESEA must ensure that all children -- especially the most disadvantaged -- have access to an education that will prepare them to succeed in the 21st century.” –NEA website
Req 6B: identify where inequities in teacher assignment exist?	Support	See 6A
Req 6C: delineate specific strategies for addressing inequities in teacher assignment?	Support	See 1C
Req 6D: Provide evidence for the probable success of the strategies it includes	Support	See 1C
Req 6F: indicate that the SEA will examine the issue of equitable teacher assignment when it monitors LEAs, and how this will be done?	Support	See 1C
Req 1A: Include an analysis of classes taught by teachers who are not highly qualified?	Oppose	Information from the NEA website dictates the opposition of the federal definition of what a HQT is because of this stance, any requirement that depends on the federal definition of a HQT will be opposed - Revise “Highly Qualified” Standard: We support ensuring that all teachers and paraprofessionals have the appropriate training and experience to be effective in their jobs. And we support changes in the federal "highly qualified" provisions that would recognize the unique nature of some teaching positions. -NEA Website

Req 1D: Identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?	Oppose	See IA
Req 2A: Identify LEAs that have not met annual measurable objectives for HQT?	Oppose	See IA
Req 2B: Include specific steps that will be taken by LEAs that have not met annual measurable objectives?	Oppose	See IA
Req 2C: delineate specific steps the SEA will take to ensure that all LEAs have plans in place to assist all non-HQ teachers to become HQ as quickly as possible	Oppose	See IA
Req 3C: include a description of programs and services the SEA will provide to assist teachers and LEAs in successfully meeting HQT goals	Oppose	See IA
Req 3E: include a description of how the State will use its available funds to address the needs of teachers who are not highly qualified?	Oppose	See IA
Req 3F: indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?	Oppose	See IA
Req 4A: indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans	Oppose	See IA
Req 4B: show how technical assistance from the SEA to help LEAs meet the 100 percent HQT goal will be targeted toward LEAs and schools that are not making AYP	Oppose	See IA
Req 4C: describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school	Oppose	See IA
Req 4D: include technical assistance or corrective actions that the SEA will apply if LEAs fail to meet HQT and AYP goals?	Oppose	See IA
Req 5B: describe how the State will limit the use of HOUSSE after the end of the 2005-06 school year	Oppose	"Maintain the High Objective Uniform State Standard of Evaluation (HOUSSE) as a method for veteran teachers to meet the highly qualified requirement." -NEA Website
Req 1B: Focus on the staffing needs of school that are not making AYP?	Neutral	
Req 1E: Identify particular courses that are often taught by non-highly qualified teachers?	Neutral	
Req 3A: include a description of the technical assistance the SEA will provide to assist LEAs in successfully carrying out their HQT plans?	Neutral	

The pieces of evidence are presented on the left side of Table 1, with the stance of the NEA on the right. I have grouped the evidence into three sections: pieces of evidence that represent issues the NEA supports, opposes, and is neutral towards. First, I will discuss why I identified the first grouping of evidence as evidence the NEA would support. The NEA has made clear statement of principles they would like to see considered in the next reauthorization of NCLB.

“Hard-to-staff schools, especially those with high concentrations of disadvantaged students or those that have consistently struggled to meet student achievement targets, need significant supports and resources, including additional targeted funding to attract and retain quality teachers, and induction programs with intensive mentoring components that will help teachers become successful. A reauthorized ESEA should exclude any provision linking student test scores to teacher compensation” (National Education Association 2006).

This emphasis on providing assistance to schools with high concentrations of disadvantaged students or underachieving populations is emphasized in Requirement 1a, 3b, 3d, and 6a-f. Because the NEA has made the insurance of quality resources through additional assistance a key point recommendation, I conclude that they would also support these pieces of evidence. The remaining piece of evidence I have classified as being supported by the NEA is 5a, which requires a description of how the state is using the HOUSSE provision. The law’s HOUSSE (High Objective Uniform State Standard of Evaluation) provisions allow such tools as an evaluation to be used as an alternative to meeting the NCLB requirements (National Education Association n.d.). This provision is meant for veteran teachers, who were working in the schools before the passage of NCLB.

The next section of Table 1 represents the 13 pieces of evidence that I have concluded the NEA would oppose. The NEA has been consistent on its opinions

regarding federally set definitions of Highly Qualified Teachers, expressing concern for the liability that their members may face if they do not reach this federal definition (Manna 2004). As a result, all of the pieces of evidence that hinge on the acceptance and usage of the federal definition of a HQT are ones that the NEA would not support. All of these 13 pieces of evidence, except 1, are slotted into this section because they depend so strongly on the federal definition of a HQT. The remaining piece of evidence that the NEA will oppose, deals with the HOUSSE provisions. As stated in the last section, NEA clearly presents support for the use of HOUSSE provisions. Requirement 5B asks for a description of how the State will limit the use of HOUSSE after the end of the 2005-06 school year specific situations. Since the NEA favors the use of this provision so strongly, we would expect that the NEA would oppose this piece of evidence.

Finally, the remaining section of the Table 1 represents the three pieces of evidence that I could not find support for or opposition of in the existing resources that present the opinions of the NEA. Because they make no clear statement of support or opposition to these requirements, I expect that the difference in the strength of the NEA will be minimal between the states that do present these differences and those states that do not.

A quantitative technique is used to test the effect of NEA presence on whether or not each piece of evidence is present in state plans. After entering the data for my dependent and independent variables I am able to run independent t-tests, which present a difference in means. I run these tests for each piece of evidence, and examine the average NEA presence (in members/1000 residents) in the states that presented that piece of evidence in their plan, and the average NEA presence (in members/1000 residents) in

the states that were missing that piece of evidence. Additionally, these tests determine the significance of the observed relationship. Finally, the mean score of the states that present the evidence is subtracted from the mean score of the states that do not present the evidence, to show the difference in means between the two measures.

Partisanship of elected officials

Democrats have traditionally championed social policies such as education, showing support for federal intervention and funding of these policies. Therefore my hypothesis states that those states that have a Democratic majority in both houses of their legislature as well as a Democratic governor would present more pieces of evidence in their state plans. The revised state plans that inform my dependent variable were collected from each state in 2006. Therefore, I will be using the state legislature makeup data from 2006, and the party of the governor in 2006 to define this independent variable. Because I expect those states with Democratic majorities to present more pieces of evidence, I have coded the states that have a Democratic majority as 1 and those states with a non-Democratic majority as 0. The data from this section has been compiled through various resources.

The information on legislature composition comes from the National Conference of State Legislators (NCSL) website. This organization provides research to inform policymakers in their exchange of ideas on the most pressing state issues. Each year NCSL compiles the partisanship counts within each state's legislature. I went through the 2006 table, coding a Democratic majority as 1 and a non-Democratic majority as 0. I did this for both the state house and state senate. The only state that I was unable to consider in this process was Nebraska. Nebraska is governed by a unicameral, non

partisan legislature. The data on gubernatorial partisanship has been accumulated from the website for the National Governors Association (NGA). The NGA has accessible records of each state's governor from approximately 1819 to the current serving governor. I compiled the party of each state's governor in 2006, coding a Democratic governor as 1, and a non-Democratic governor as 0. Finally I compiled a measure that accounts for democratic control in all 3 areas of state government. Since Nebraska had a Republican governor in 2006 I am still able to count it as a state without a democratic majority.

In terms of this data, my hypotheses are as follows. Hypothesis 2 states that those states that are unified in democratic control will present more supporting items in their state plans than those states that are not unified in Democratic control. I will test the validity of this hypothesis by performing an independent t-test, comparing the average supporting items presented by the states that are unified in Democratic control by the states that are not. I will subtract the former from the latter, and expect that I will produce a positive number. Likewise, hypothesis 3 states that those states that are unified in Democratic control will also be more likely to present *each* piece of evidence than those states that are now. I will determine the validity of these hypotheses by running cross-tabs, comparing the average pieces of evidence presented by the states that did have a Democratic majority in their legislature and the average pieces of evidence presented by the states that did not. I will do the same for each piece of evidence.

State Starting Points

I hypothesize that because of the weak relationship between the federal government and the states, other factors will influence the state implementation of this federal provision. Incrementalist ideas and available data on state teacher policy have led

me to the consideration of state starting points as an independent variable. With subject matter testing as one of the three federal requirements for a highly qualified teacher, I suspect that those states whose certification already required subject matter testing would have been better prepared to implement the HQT provisions. For the purpose of my research, I will consider the state's teacher certification requirements in 2001. Signed into law in 2002, NCLB would not have affected state teacher policy at this point. I expect that states who had already incorporated subject matter testing as a requirement for teacher certification before NCLB will have more complete plans, presenting more supporting items in their state plans.

Every year, the research center at Education Week puts out a report entitled "Quality Counts." This report features an exploration of each state's educational policies, including the policies governing teacher certification. I will be using the data presented in their 2002 Quality Counts report to identify those states that required subject matter tests as a part of teacher certification in 2001. There is one specific measurement that comes from these data that I will be using for this independent variable: if the state requires written tests for beginning-teacher license in the subject area that the teacher will be teaching. I have coded this information so that, if a state did require subject matter testing as a portion of the certification process, it receives a 1. If it did not, it receives a 0.

I am considering this specific measure from the Quality Counts reports because one of the three requirements for Highly Qualified Teachers is that teachers pass a test to prove they are competent in the subject matter they are teaching. If the state already made use of subject matter tests as an aspect of the certification process, there would be significantly less overhead in implementing subject matter tests that satisfied the HQT

requirement. Therefore, I expect that those states who already tested their teachers as part of the certification process will have more successfully implemented the federal HQT provisions.

In terms of these data, my hypothesis is as follows. Hypothesis 4 states that the states that required subject matter tests as a part of the certification process in 2001 will present more pieces of evidence in their plans for HQTs than those states that did not require subject matter testing as a part of the certification process. I will determine the validity of this hypothesis by performing an independent t-test, comparing the average pieces of evidence presented by the states that did require subject matter testing in 2001 and the average pieces of evidence presented by the states that did not require subject matter testing in 2001. I will subtract the former from the latter, and expect that I will produce a positive number.

Data capabilities

In a shift towards increasing accountability, NCLB moves in the direction of standards based reforms. In order to monitor these reforms, the Department of Education requires that states report many different data annually. When discussing the state capabilities with the head of the Department of Education's Highly Qualified Teacher team, she continually mentioned the variance in data capabilities across states (Witt 2008). With such an emphasis on presenting data to the Department of Education, the ability to accumulate data from across the state and compile it in a useful way is necessary. Therefore, I hypothesize that those states that had a more advanced teacher data system before NCLB would be more apt to implement the Highly Qualified Teacher provisions.

The Data Quality Campaign is an organization that advocates for the enhancement of educational data at the state level. They have put out surveys to each state, asking questions about 10 different elements of data systems. One of the elements they consider involves data on teachers. Because NCLB demands individual consideration of each teacher, I will be considering when each state implemented a unique identifier for every teacher. I have assigned each state that did not have a unique teacher identifier in place in 2001 a 0, and each state that did have a unique teacher identifier in place in 2001 a 1. Ideally, I would be able to account for how long this unique identifier was in place as I would expect that the longer the identifier was in place, the more pieces of evidence the state would present. However this information is not available, so my analysis will simply consider whether or not it was in place in 2001.

In terms of these data, my hypotheses are as follows. Hypothesis 5 states that the states who had a unique teacher identifier in place in 2001 will present more pieces of evidence in their plans for Highly Qualified teachers than those states that did not. I will determine the validity of this hypothesis by performing an independent t-test, comparing the average pieces of evidence presented by the states that did have a unique identifier in place in 2001 and the average pieces of evidence presented by the states that did not. I will subtract the former from the latter, and expect that I will produce a positive number. Hypothesis 6 states that those states with a unique identifier in place in 2001 will be more likely to present the supporting items that deal specifically with data. I will test this hypothesis by running cross-tabs between this measure for data capacity and each relevant piece of evidence.

Describing the methods for analyzing all variables simultaneously

While the previous analyses offer important insights into the data and how they behave, it is important to provide an analysis of the way independent variables interact with the dependent variables when considered simultaneously. In order to provide this analysis I will first run OLS regression using all 4 independent variables, and the total number of supporting items presented in each plan. I use OLS regression here because the dependent variable is a count variable ranging from 0-25. While a Poisson model would have been ideal for this count, OLS is robust. Finally, I will use logit regressions to analyze the relationship between each of the independent variables and each piece of evidence. Because these dependent variables are dichotomous, logit regression is the appropriate model of analysis.

It is important to analyze the data through these regression models because it can provide information unattainable through individual analyses. With regression models, the relationship between each independent variable and dependent variable is presented while controlling for the effects of all other independent variables. Through these analyses, we gain an interpretation of the data that considers the independent variable in a broader context, considering the effect of other independent variables simultaneously. While the previous analyses are important to the research, this section will conclude the analysis with a more accurate depiction of the relationships previously explored.

Conclusion

Analyzing the data through the previously stated tests will allow me to first study the individual effect of each independent variable, and then determine the true effect of each variable while holding the others constant. The following section will present the

findings from each of these analyses, and discuss the findings that can be derived from these outcomes. First analyzing each independent variable on its own, I will conclude the next chapter with the results from my regression equation, and discuss what my final conclusions suggest.

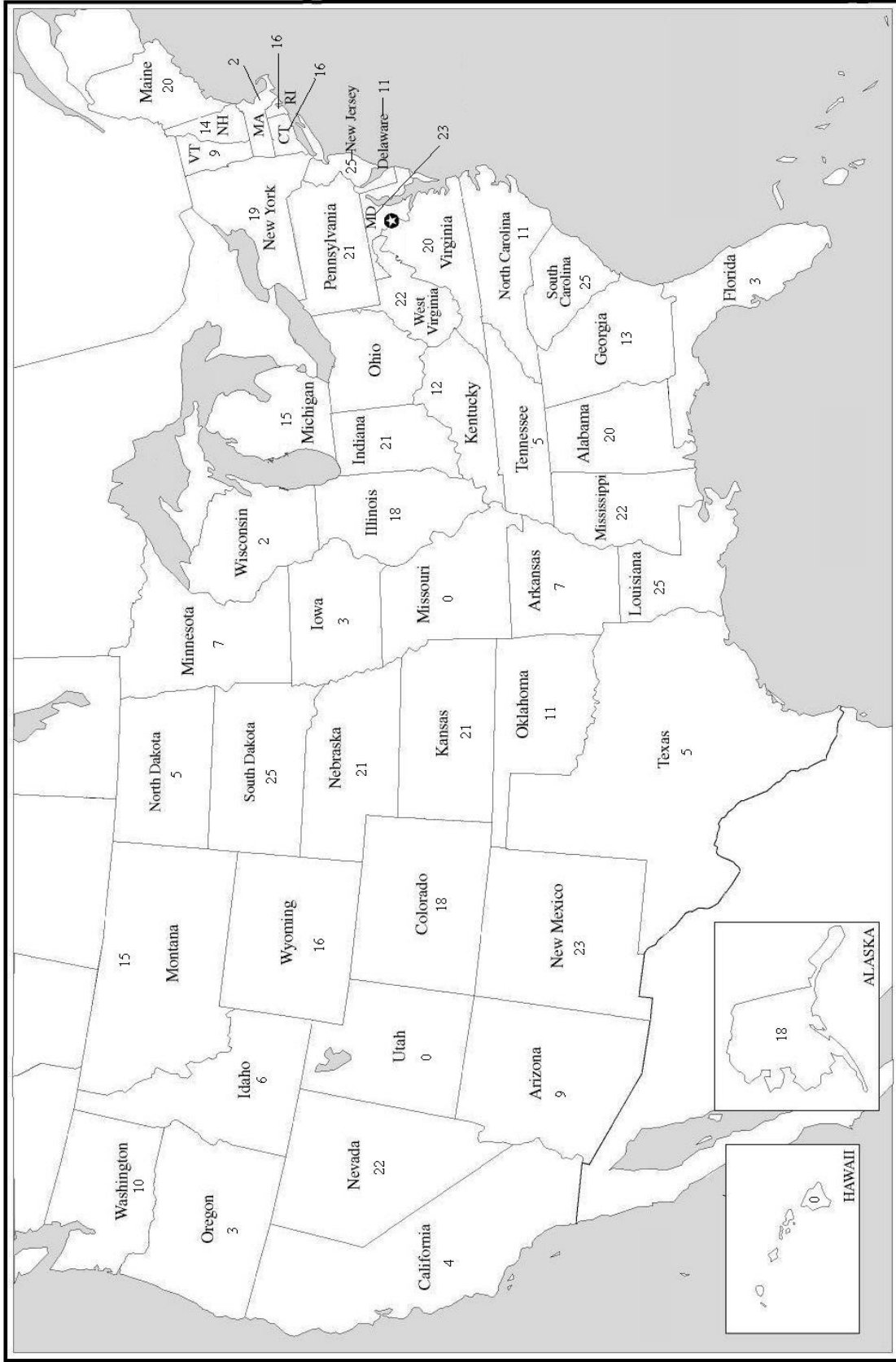
Chapter 4: Results and Analysis

Analysis of Dependent Variables

Before presenting the findings from the data analysis, it is important to take an overall look at the findings of the dependent variable. The literature reviewed in the preceding sections of this paper argues that the lack of federal enforcement of the Highly Qualified Teacher provision has led to a weak relationship between the federal and state governments. The research also shows that each state's implementation of this provision is extremely different, representing the variance in how the law is being carried out on the ground. In order to show that my dependent variable follows this set up, it is important to examine the success of each state in implementing each part of the federal provision.

Figure 1 presents the number of supporting items present in each state plan. State plans are reviewed by looking for a total number of 25 pieces of evidence. I created this map by summing the values that were coded to represent if the evidence is present in the state plan or not. With 1 meaning the piece of evidence is present and 0 meaning the piece of evidence is absent, a score of 25 shows that all 25 pieces of evidence were present in the state plan. There is a large range in how many pieces of evidence were present in the plans. The average number of evidence presented in the state plan is 13.58, and the median is 15. The mean and median values are close to one another, demonstrating no skewing of the data. There are outliers on both extremes, however since the scale is limited in scope from 0-25, these outliers do not have a strong effect on the data. This data supports what previous research has found, that states are extremely varied in their implementation of this provision.

Figure 1. Total Pieces of Evidence Presented in Each Revised State Plan for Implementation of HQT Provisions



While I use the total pieces of evidence presented in each plan as the dependent variable in some of the following analyses, I also break this measure down further and analyze each piece of evidence independently.

Table 2. Distribution of Dependent Variables

Piece of Evidence	# of states with item	Proportion of States
Req 1A: Include an analysis of classes taught by teachers who are not highly qualified?	33	0.66
Req 1B: Focus on the staffing needs of school that are not making AYP?	29	0.58
Req 1C: Identify particular groups of teachers to which the State's plan must pay particular attention?	31	0.62
Req 1D: Identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?	25	0.5
Req 1E: Identify particular courses that are often taught by non-highly qualified teachers?	31	0.62
Req 2A: Identify LEAs that have not met annual measurable objectives for HQT?	24	0.48
Req 2B: Include specific steps that will be taken by LEAs that have not met annual measurable objectives?	31	0.62
Req 2C: delineate specific steps the SEA will take to ensure that all LEAs have plans in place to assist all non-HQ teachers to become HQ as quickly as possible	35	0.7
Req 3A: include a description of the technical assistance the SEA will provide to assist LEAs in successfully carrying out their HQT plans?	36	0.72
Req 3B: plan indicate that the staffing and professional development needs of schools that are not making AYP will be given high priority?	33	0.66
Req 3C: include a description of programs and services the SEA will provide to assist teachers and LEAs in successfully meeting HQT goals	37	0.74

Req 3D: address the needs of any subgroups of teachers identified in Requirement 1?	27	0.54
Req 3E: include a description of how the State will use its available funds to address the needs of teachers who are not highly qualified?	31	0.62
Req 3F: indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?	26	0.52
Req 4A: indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans	35	0.7
Req 4B: show how technical assistance from the SEA to help LEAs meet the 100 percent HQT goal will be targeted toward LEAs and schools that are not making AYP	30	0.6
Req 4C: describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school	28	0.56
Req 4D: include technical assistance or corrective actions that the SEA will apply if LEAs fail to meet HQT and AYP goals?	27	0.54
Req 5A: describe how and when the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year	33	0.66
Req 5B: describe how the State will limit the use of HOUSSE after the end of the 2005-06 school year	22	0.44
Req 6A: include a written equity plan	26	0.52
Req 6B: identify where inequities in teacher assignment exist?	16	0.32
Req 6C: delineate specific strategies for addressing inequities in teacher assignment?	24	0.48
Req 6D: Provide evidence for the probable success of the strategies it includes	16	0.32
Req 6F: indicate that the SEA will examine the issue of equitable teacher assignment when it monitors LEAs, and how this will be done?	20	0.4
Average	28.24	0.56

Table 2 presents each piece of evidence along with the number of states that presented this item in their state plan, as well as proportion of states that presented each piece of evidence. In the first column the maximum number would be 50 (meaning that all 50 states presented that piece of evidence in their state plan) and the minimum would be 0 (meaning that no state or district presented that piece of evidence in their state plan). The mean is determined by adding up the scores for each state, and dividing by the total number of states. Each state could score either a 0 (evidence not present) or a 1 (evidence present). The mean scores are varied, and fall between about .3 and .7. This represents a strong variance in the dependent variable, and warrants further inquiry as to why. In order to identify the variables that influence state implementation and dictate this variance, we need to explore each of the proposed independent variables on its own. Figure 2 presents each of the hypotheses as a reminder of the expected relationships.

Figure 2. Hypotheses

Hypothesis 1 states that the state's success in presenting each piece of evidence in the plan for implementation of this federal law will be greatly influenced by the interests of the NEA and that states with stronger NEA presence will be more impacted by the interests of the NEA. → **Union Presence**

Hypothesis 2 states that those states that are unified in democratic control will present more supporting items in their state plans than those states that are not unified in Democratic control. → **Democratic Control Total**

Hypothesis 3 states that those states that are unified in democratic control will also be more likely to present *each* piece of evidence than those states that are now. → **Democratic Control Each**

Hypothesis 4 states that the states that required subject matter tests as a part of the certification process in 2001 will present more pieces of evidence in their plans for HQTs than those states that did not require subject matter testing as a part of the certification process. → **Subject Matter Testing**

Hypothesis 5 states that the states who had a unique teacher identifier in place in 2001 will present more pieces of evidence in their plans for Highly Qualified teachers than those states that did not. → **Unique Teacher ID Total**

Hypothesis 6 states that those states with a unique identifier in place in 2001 will be more likely to present the supporting items that deal specifically with data. → **Unique Teacher ID Each**

Analysis of Independent Variables

Independent Variable 1: Union Presence

The preceding chapters suggest the reasons that union presence is expected to play a role in state implementation of the HQT provisions of NCLB. With members on all levels of implementation- from the classroom to state offices- I hypothesize that these members' impact will be evident in the evidence that each state presents in its plan. In order to test this hypothesis, difference in mean tests were run for each piece of evidence between the average NEA score of the states that had the evidence present in their plans to the average NEA score of the states that did not have the evidence present in their plans. Before we can analyze these tests of the relationship between strong union presence and implementation of this law, however, it is important to review the data we will be working with. In the previous section I described the method for determining the strength of the NEA in each state.

The results in Table 3 (pg. 46) show the number of NEA members/1000 state residents in each state. There are a few things to note from Table 3. First, the NEA score ranges from 1.86 NEA members/1000 residents in Texas, to 22.52 NEA members/1000 residents in the state of New Jersey. The average NEA score is 10.96, so there is a pretty large range from the states with small NEA presence to those with large NEA presence. Finally, it is important to note that there are no extreme outliers in the states. While there is a substantial range present between values, the mean (10.95) is close in value to the median (10.92), and there are no large jumps between the extreme values on either end.

This independent variable provides a stable opportunity for standard comparison of NEA presence from state to state.

Table 3. NEA Members in Each State			
State Name	NEA Members/1000 State Residents	State Name	NEA Members/1000 State Residents
Texas	1.86	Rhode Island	10.92
New York	2.14	Nevada	10.94
Mississippi	2.74	Ohio	11.17
South Carolina	3.13	Maryland	11.35
Louisiana	3.60	Oregon	11.49
Georgia	4.21	Connecticut	11.95
New Mexico	4.37	Wyoming	12.60
Arizona	5.53	Iowa	12.70
Missouri	5.77	New Hampshire	12.82
Arkansas	5.96	Washington	13.33
North Carolina	6.82	Delaware	13.87
Florida	7.03	North Dakota	14.10
Oklahoma	7.72	Pennsylvania	14.70
Colorado	8.06	Montana	16.23
Virginia	8.10	Nebraska	16.29
West Virginia	8.14	Hawaii	16.33
Indiana	8.46	Massachusetts	16.35
Kentucky	8.89	Minnesota	16.59
South Dakota	9.18	Michigan	17.24
California	9.20	Wisconsin	17.67
Idaho	9.28	Alaska	18.34
Tennessee	9.50	Vermont	18.56
Utah	9.74	Maine	19.57
Illinois	10.13	Alabama	20.98
Kansas	10.56	New Jersey	22.52
		Average	10.975

Having examined the data that is being used in the testing of this section's hypothesis, we can now begin to analyze the relationship between this independent variable and the dependent variable. The specific hypothesis, that the interests of the NEA, as the largest teacher's union, will play a large role in how states plan to implement

the highly qualified teacher provision of NCLB, and that states with stronger NEA presence will be more impacted by the interests of the NEA, was tested using difference of mean measures.

Table 4 (pg. 51) presents the actual findings that were calculated using the previously discussed independent and dependent variables. For each requirement, Table 4 presents the average number of NEA members/1000 state residents in each of the states who did present the piece of evidence, as well as the average number of NEA members/1000 state residents in each of the states that did not present the evidence. The average number of NEA members of the states that present the evidence is subtracted from the average number of NEA members of the states that do not present the evidence, to show the difference in means between the two measures, and these

The column presenting the “expected difference” is taken from the analysis of the stances of the NEA done in previous sections of this paper. It is expected that if the NEA does support a specific piece of evidence, there will be more NEA members in the “evidence is present” column. Since the difference in means is found by subtracting the NEA score in states where the evidence is present *from* the NEA score in state where the evidence is missing, if the NEA supports a piece of evidence we would expect that the difference in means would be negative. Likewise, if the NEA does not support a specific piece of evidence, it is expected that the difference will be positive. The actual difference between the two values is then computed, and the significance of the independent t-tests is presented. The independent t-tests are testing the hypothesis that there is no difference between the average number of NEA members in the states who presented the evidence,

and the average number of NEA members in the states who were missing the evidence. The p-value presents the significance of the effect of NEA strength on this dichotomous relationship. The lower the p-value, the less likely it is that the observed relationship between the two variables is due to chance (meaning, the higher the chance that there is a relationship between the strength of the NEA and the presence or absence of each piece of evidence).

Therefore, the results of this data analysis are presented in three sections. The first section of Table 4 presents the results from the pieces of evidence that I concluded the NEA would support, thus the difference between these two values should be a negative number. However, as you can see in Table 4, only 3 of the 9 rows in this section present a negative number in the “actual difference column.” Furthermore, in those rows that do boast a negative number, we see that the actual difference in numbers of NEA members is extremely small (-.59, -.18, and -.08). Moreover, these nominal differences are not proved statistically significant by the stated p-values.

Actually, none of the relationships in this first section are statistically significant, with rather large p-values. These findings do not support my hypothesis. The data shows that the majority of the pieces of evidence that we would expect the NEA to support, in fact, is more often present in states with a lower count of NEA members. The presented p-values, however, are all quite large, suggesting that the relationship in this set of evidence is not significant anyway.

The second section of Table 4 examines the results from the pieces of evidence that I concluded the NEA would oppose. As a reminder, if the NEA opposes these pieces,

we would expect that the average number of NEA members would be larger in the states where this piece of evidence was absent. Numerically, we would expect that the difference in means would yield a positive answer. There were 13 pieces of evidence that I concluded the NEA would not support, and 11 of these 13 pieces of evidence did actually yield a positive answer. The largest differences in this section came in the consideration of pieces of evidence that used the federal definition of Highly Qualified Teacher (Req 2B, 3E, 4A, 4B, and 4C). The difference in NEA membership, while not statistically significant, suggests some support for my hypothesis. It reinforces the fact that the NEA does not support the federal government defining requirements for state and local actors.

While 9 of the 11 requirements in this section behave (more or less) how I expected, one of the 2 requirements that did not fit with my predictions is especially disconcerting. Requirement 5B, which asks states to outline how they plan to eliminate the use of the HOUSSE provisions, actually yields a negative number, meaning that there was a great presence of NEA members in the states that had this piece of evidence in their plan than the states that were missing this piece of evidence. This is the only piece of evidence that presents a relationship that is statistically significant, with a P-value of .057. This data explains that we can be over 90 percent sure that the relationship between the number of NEA members in each state and the presence of this piece of evidence is not due to chance. This data do not support my hypothesis. While the NEA did not have a clear stance on all of the pieces of evidence, they are very explicit with their opinions on the HOUSSE provisions- they support them. It is surprising, therefore, that the states who did present a plan for limiting the use of these provisions had a higher

number of NEA members than the states that did not present a plan for limiting the use of these provisions.

Finally, the third section of Table 4 examines the relationship between NEA strength and the presence or absence of a piece of evidence for those pieces of evidence that the NEA was neutral towards. Because I could not identify the stance of the NEA on these specific issues, I was unable to provide a prediction as to what the value of the difference in means would be. There were 3 pieces of evidence that the NEA is neutral towards. The differences in the number of NEA members for each requirement are less than 1, and none offer a statistically significant relationship. I did not have a specific hypothesis regarding the pieces of evidence that the NEA did not have obvious stances on, however the minimal differences between the NEA membership levels in these evidences proves me correct in concluding that these evidences do not deal with issues that the NEA focuses on.

Overall, these results do not support my hypothesis. I expected that the states that presented pieces of evidence that the NEA opposed would have significantly less NEA members than the states who were missing these pieces of evidence that the NEA agreed with. Only 3 of the 9 pieces of evidence in this section follow my prediction, and those values offer no statistical significance. Likewise, I expected that the states who presented pieces of evidence that the NEA agreed with would have significantly more NEA members than the states who were missing these pieces of evidence that the NEA agreed with. While the second section of Table 4 does present some support for this, with 9 of 11 pieces of evidence following this expectation, none of these values are significant.

Table 4. (Section 1) Independent T-Tests for Evidence Supported by the NEA

Piece of Evidence	Mean NEA Score in States where evidence is present	Mean NEA Score in States where evidence is present	Expected Difference	Actual Difference	P-Value
Req 1C: Identify particular groups of teachers to which the State's plan must pay particular attention?	10.576	11.175	Negative	-0.599	0.697
Req 3B: plan indicates that the staffing and professional development needs of schools that are not making AYP will be given high priority?	11.34	10.83	Negative	0.507	0.774
Req 3D: address the needs of any subgroups of teachers identified in Requirement 1?	11.96	9.75	Negative	2.210	0.138
Req 5A: describe how and when the SEA will complete the HOUSSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year	10.62	10.81	Negative	-0.188	0.907
Req 6A: include a written equity plan	11.07	10.52	Negative	0.548	0.715
Req 6B: identify where inequities in teacher assignment exist?	10.58	10.67	Negative	-0.083	0.958
Req 6C: delineate specific strategies for addressing inequities in teacher assignment?	11.32	9.82	Negative	1.496	0.327
Req 6D: Provide evidence for the probable success of the strategies it includes	10.93	10.26	Negative	0.668	0.676
Req 6F: indicate that the SEA will examine the issue of equitable teacher assignment when it monitors LEAs, and how this will be done?	10.83	10.22	Negative	0.610	0.685

Table 4. (Section 2) Independent T-Tests for Evidence Opposed by the NEA

Piece of Evidence	Mean NEA Score in States where evidence is present	Mean NEA Score in States where evidence is not present	Expected Difference	Actual Difference	P-Value
Req 1A: Include an analysis of classes taught by teachers who are not highly qualified?	10.816	10.816	Positive	0.000	1.000
Req 1D: Identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?	10.84	10.39	Positive	0.455	0.768
Req 2A: Identify LEAs that have not met annual measurable objectives for HQT?	11.46	10.16	Positive	1.301	0.393
Req 2B: Include specific steps that will be taken by LEAs that have not met annual measurable objectives?	11.56	10.47	Positive	1.094	0.492
Req 2C: delineate specific steps the SEA will take to ensure that all LEAs have plans in place to assist all non-HQ teachers to become HQ as quickly as possible	11.32	10.59	Positive	0.729	0.663
Req 3C: include a description of programs and services the SEA will provide to assist teachers and LEAs in successfully meeting HQT goals	12.52	10.30	Positive	2.222	0.229
Req 3E: include a description of how the State will use its available funds to address the needs of teachers who are not highly qualified?	11.37	10.32	Positive	1.052	0.503
Req 3F: indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?	10.99	10.91	Positive	0.079	0.959

Table 4. (Section 2) Independent T-Tests for Evidence Opposed by the NEA (Continued)

Piece of Evidence	Mean NEA Score in States where evidence is not present	Mean NEA Score in States where evidence is present	Expected Difference	Actual Difference	P-Value
Req 4A: indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans	11.83	10.45	Positive	1.384	0.420
Req 4B: show how technical assistance from the SEA to help LEAs meet the 100 percent HQT goal will be targeted toward LEAs and schools that are not making AYP	11.85	10.46	Positive	1.397	0.390
Req 4C: describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school	11.71	9.85	Positive	1.862	0.264
Req 4D: include technical assistance or corrective actions that the SEA will apply if LEAs fail to meet HQT and AYP goals?	11.38	10.77	Positive	0.608	0.699
Req 5B: describe how the State will limit the use of HOUSSE after the end of the 2005-06 school year	9.56	12.40	Positive	-2.832	0.057**

Table 4. (Section 3) Independent T-Tests for Evidence where the NEA's stance is Neutral

Piece of Evidence	Mean NEA Score in States where evidence is not present	Mean NEA Score in States where evidence is present	Expected Difference	Actual Difference	P-Value
Req 1B: Focus on the staffing needs of school that are not making AYP?	10.348	11.119	xxx	-0.771	0.611
Req 1E: Identify particular courses that are often taught by non-highly qualified teachers?	10.96	10.67	xxx	0.289	0.851
Req 3A: include a description of the technical assistance the SEA will provide to assist LEAs in successfully carrying out their HQT plans?	10.73	10.96	xxx	-0.225	0.898

Independent Variable 2: Legislature and Gubernatorial Make-up

The consideration of the party make up of each state legislature and governor is being considered as an independent variable with influences on state implementation of the Highly Qualified Teacher provisions of NCLB. This independent variable is composed of a few different measures- the party make-up of the state house, senate, and the party of the governor. I have two predictions about the influence of this variable on state implementation of this policy. My first prediction is that states with a Democratic majority in the house and senate, as well as a Democratic governor in 2006 (the year these state plans were submitted) will present more pieces of evidence in their state plans. For this first hypothesis, my dependent variable is the total number of pieces of evidence that are present in the state plan. My second prediction is that states with a Democratic majority in the house and senate, as well as a Democratic governor in 2006 will be more likely to present *each* piece of evidence in their state plans. For this hypothesis, I consider each piece of evidence as its own dependent variable. Before the analysis of these results, however, it is important to provide some information on the independent variable.

Table 5. 2006 State Legislatures and Governors

States with a Democratic majority in their Senate	24
States with a Democratic majority in their House	24
States with a Democratic Governor	22
State with United Democratic Control	8

As you can see in Table 5, just under half of the states had Democratic control in each of the three bodies of government. However, when considering the effect of a state government that is united Democratically, we must identify only those states that have a

Democratic majority in both houses of their legislature, as well as a Democratic governor. In 2006, there were 8 states that met all of these conditions. These are the states that I consider in my analysis on the effect of a united Democratic state government on state implementation of the Highly Qualified Teacher provision of NCLB.

My first hypothesis is that states with a Democratic majority in the house and senate, as well as a Democratic governor in 2006 will present more pieces of evidence in their state plans. To test this hypothesis I use a measure the difference of means.

Table 6- The Effect of a United Democratic State Government on evidence presented in state plans.

Control of State Government	N	Mean Pieces of Evidence Presented	Sig. (2-tailed)
Unified Democratic	8	19.25	.032*
Not Unified Democratic	42	12.62	

Table 6 shows the effect of having a unified Democratic government on the number of supporting items presented in each state plan. Table 6 shows that those states that were unified in Democratic control presented 6.63 more pieces of evidence than those states that were not unified in Democratic control. Furthermore, Table 6 shows that this finding is significant at the .05 level. This finding concludes that those states with a unified Democratic government are more likely to present a greater overall sum of evidence in their state plans.

My second hypothesis is that states with a Democratic majority in the house and senate, as well as a Democratic governor in 2006 will be more likely to present *each* piece of evidence in their state plans. Because both variables here (united Democratic

control or not, evidence present or not) are dichotomous, I use cross-tabs to test for a relationship between the two. I run a cross-tab, generating a chi-square value that establishes significance in the presented relationship or not. Then I analyze the values generated and note whether or not the relationship's significance is in the predicted direction (that a united Democratic government is more likely to present that specific piece of evidence).

Table 7: Crosstabs
States with Democratically Unified Governments by Each Piece of Evidence

Piece of Evidence	χ^2
Req 1A: Include an analysis of classes taught by teachers who are not highly qualified?	2.283
Req 1B: Focus on the staffing needs of school that are not making AYP?	3.835**
Req 1C: Identify particular groups of teachers to which the State's plan must pay particular attention?	0.893
Req 1D: Identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?	10.317***
Req 1E: Identify particular courses that are often taught by non-highly qualified teachers?	0.025
Req 2A: Identify LEAs that have not met annual measurable objectives for HQT?	3.714*
Req 2B: Include specific steps that will be taken by LEAs that have not met annual measurable objectives?	3.402*
Req 2C: delineate specific steps the SEA will take to ensure that all LEAs have plans in place to assist all non-HQ teachers to become HQ as quickly as possible	4.482**
Req 3A: include a description of the technical assistance the SEA will provide to assist LEAs in successfully carrying out their HQT plans?	1.389
Req 3B: plan indicate that the staffing and professional development needs of schools that are not making AYP will be given high priority?	0.5

Req 3C: include a description of programs and services the SEA will provide to assist teachers and LEAs in successfully meeting HQT goals	1.389
Req 3D: address the needs of any subgroups of teachers identified in Requirement 1?	2.018
Req 3E: include a description of how the State will use its available funds to address the needs of teachers who are not highly qualified?	0.893
Req 3F: indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?	2.381
Req 4A: indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans	1.664
Req 4B: show how technical assistance from the SEA to help LEAs meet the 100 percent HQT goal will be targeted toward LEAs and schools that are not making AYP	3.402*
Req 4C: describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school	4.303**
Req 4D: include technical assistance or corrective actions that the SEA will apply if LEAs fail to meet HQT and AYP goals?	4.809**
Req 5A: describe how and when the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year	0.5
Req 5B: describe how the State will limit the use of HOUSSE after the end of the 2005-06 school year	1.323
Req 6A: include a written equity plan	0.421
Req 6B: identify where inequities in teacher assignment exist?	1.418
Req 6C: delineate specific strategies for addressing inequities in teacher assignment?	0.015
Req 6D: Provide evidence for the probable success of the strategies it includes	4.071**
Req 6F: indicate that the SEA will examine the issue of equitable teacher assignment when it monitors LEAs, and how this will be done?	2.009

Note: *p<.10, **p<.05, ***p<.01.

Table 7 presents each piece of evidence, the chi-square value (marked if statistically significant), and the direction of the relationship. For 22 pieces of evidence,

we see the predicted relationship. That is, those 22 pieces of evidence are more likely to be present in plans generated by a state that is united in Democratic control than in states that are not. Furthermore, most of those relationships have p-values that are less than .05, showing the significance of these relationships.

For the purpose of analysis, it is most useful to consider each piece of evidence in the context of the 6 requirements it supports. The first requirement demands that the state plans must provide a detailed analysis of the core academic subject classes in the State that are currently *not* being taught by highly qualified teachers. There are 5 pieces of evidence that the federal government considered in the evaluation of this requirement. All five pieces of evidence are more likely to be presented in states that have a Democratically united state government (these relationships are presented in the last column). Only two of these pieces of evidence, however, relate to the independent variable at a level of significance equal to or less than .05. These pieces of evidence are Req 1B, which focuses on the staffing needs of school that are not meeting academic yearly progress, and Req 1D which identifies districts and school around the state where significant numbers of teachers do not meet the defined Highly Qualified Teacher standards.

The second requirement asks for information on HQT status in each local education agency (LEA), and the steps the state education agency (SEA) will take to ensure that each LEA has plans in place to assist teachers who are not highly qualified to attain HQT status as quickly as possible. There are three pieces of evidence within this requirement, and again, all three show the expected direction; all three pieces of evidence

are more likely to be presented in states that have a Democratically united state government. All three relationships have values that are significant at the .1 level.

The third requirement asks for information on the technical assistance, programs, and services that the SEA will offer to assist LEAs in successfully completing their HQT plans, particularly where large groups of teachers are not highly qualified, and the resources the LEAs will use to meet their HQT goals. There are 6 pieces of evidence within this requirement, and while most relationships show the predicted direction, none of the relationships are statistically significant. This is because matters of technology are not specific to the Democratic Party, nor are they more likely to be established in those states with unified control.

The fourth requirement asks states to describe how the SEA will work with LEAs that fail to reach the 100 percent HQT goal by the end of the 2006-07 school year. This requirement focuses on accountability, and presents 4 pieces of evidence for reviewers to look for in the state plans. Of these 4 pieces of evidence, only the last 2 offer a significant relationship with the independent variable in the expected direction. Both 4C, which asks for a description of how the SEA will monitor LEA compliance in implementing their own plans, is more likely to be present in a state where democrats are unified in control. Likewise, the analysis of 4D, which describes the action SEA will take if LEAs do not meet HQT and AYP goals, shows a significant relationship in the predicted direction.

The fifth requirement deals with the HOUSSSE provisions, which were discussed in greater length in the analysis of union presence. There are 2 pieces of evidence

corresponding to this requirement, one asking how the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the 2005-2006 school year, and the other asking how the State will limit the use of these provisions after the 2005-2006 school year. There is no relationship between the independent variable and the first piece of evidence, however there is a significant relationship between unified Democratic control and the inclusion of the second piece of evidence. This suggests that those states with a unified Democratic government are more likely to plan for the phasing out of the HOUSSE provisions. This finding is somewhat surprising as Democrats tend to be more open to union influence, and as discussed previously, unions were quite outspoken in their appreciation of these provisions.

Finally, the sixth requirement deals with the requested “equity plan” that ensures that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children. There are 5 pieces of evidence associated with this requirement, and according to my analyses, only one piece of evidence seems to have a significant relationship with a state government that is united in Democratic control. This evidence, 6D, deals with providing evidence for the probable success of the strategies put forth for equitable distribution of quality teachers.

Overall, having a government unified in Democratic control seems to encourage the presentation of more pieces of evidence than having a state government that is not unified in Democratic control.

Independent Variable 3: Subject Matter Testing

The remaining independent variables, involving subject matter testing and the presence of a unique teacher identifier are more straight forward than the previous independent variables. This independent variable is dichotomous, considering only whether or not each state’s certification process required subject matter testing in 2001. Because subject matter testing is one of the three federally defined components of a highly qualified teacher, states that already have this measure in place are able to focus on implementing the more specific supporting items the Department is looking for in each plan. Those states that did not have this in place would have to focus on implementing this more comprehensive reform, and would not be able to focus on the details of the requested supporting items. Therefore, I assume that the already existing presence of this variable will facilitate an easier implementation of the HQT provisions. In terms of my data, I expect that those states that already required subject matter tests as a part of their certification process would present more pieces of evidence than those states that did not. Unlike the previous two independent variables, there are not specific pieces of evidence that I expect to show this relationship with more significance, so I will not break down the dependent variable into each individual piece of evidence. Instead I proceed with a difference of means test, simply comparing the average pieces of evidence presented in states who did require testing before the passage of NCLB, and states that did not.

Table 8- The Effect of Policy Starting Points on evidence presented in state plans.

Starting Certification Policy	N	Mean Pieces of Evidence Presented	Sig. (2-tailed)
Includes subject matter testing	34	13.97	.714
Does not include subject matter testing	16	13.06	

Table 8 shows that there is barely a difference in the average pieces of evidence presented in plans put forth by states that had subject matter testing as a part of their certification process and those states that did not. According to the independent t-test, those states that already used subject matter testing in their certification process presented about .9 more pieces of evidence than those states that did not. That said, the significance value for this relationship is too high to make this conclusion with any certainty. When considering exactly what the requirements ask for, it is understandable that this measure does not have much of an effect on the dependent variable. While this variable may indeed allow states to be further along on reaching their goal of having all teachers be highly qualified, the state plans simply measure the ways in which states plan to work to identify those teachers who are not highly qualified, and ways to facilitate their process towards this status.

Independent Variable #4: Presence of a Unique Teacher Identifier

The final independent variable that we will consider is whether or not the state had a unique teacher identifier in place before the passage of NCLB. As previously established, this measure represents the state's data capabilities in respect to teachers. Many pieces of evidence require some sort of teacher measurement, so I predict that this independent variable will have an effect on the overall pieces of evidence presented, as well as some specific pieces of evidence considered individually. My first prediction is that states that had a unique teacher identifier in place before NCLB will present more pieces of evidence in their state plans. For this first hypothesis, my dependent variable is the total number of pieces of evidence that are present in the state plan. My second prediction is that states that had a unique teacher identifier in place before NCLB will be

more likely to present *some specific* pieces of evidence in their state plans. For this hypothesis, I will consider these specific pieces of evidence as their own independent variables.

My first hypothesis asserts that states that had a unique teacher identifier in place before NCLB will present more pieces of evidence in their state plans. To test this hypothesis I use a measure of the difference of means, specifically the independent t-test function.

Table 9- The Effect of Data Capabilities on evidence presented in state plans.

Teacher Data Capabilities	N	Mean Pieces of Evidence Presented	Sig. (2-tailed)
State had unique identifier in place before NCLB	36	13.97	0.686
State did not have unique identifier in place before NCLB	14	12.93	

Table 9 shows that there were 36 states that did have a unique teacher identifier in place in 2001, and 14 states that did not. Further, it shows that those states who did have this identifier in place presented about 1 piece of evidence more than those states that did not have this system in place. However, we see that the relationship is not statistically significant. While no overall relationship is present in this analysis of the dependent variable as the complete sum of presented evidence, there are certain pieces of evidence that focus specifically on identifying teachers as Highly Qualified.

My second hypothesis states that those pieces of evidence that focus on identifying teachers through whatever capacity will be present at a greater rate in states that had a unique teacher identifier in place before the passage of NCLB than in those states that did not. Of the 25 supporting items the Department considers in its review of

each state plan, I have identified 9 that specifically deal with identifying teachers. I expect that having a unique identifier in place will make it easier to present specific supporting items. To test this hypothesis I ran cross-tab tests on these two variables. I compiled the results and the chi-square values of significance in the following table, Table 10.

Table 10- Crosstabs
Teacher Identification by relevant pieces of evidence

Piece of Evidence	χ^2
Req 1A: Include an analysis of classes taught by teachers who are not highly qualified?	0.001
Req 1C: Identify particular groups of teachers to which the State's plan must pay particular attention?	0.149
Req 1D: Identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?	0.206
Req 1E: Identify particular courses that are often taught by non-highly qualified teachers?	0.149
Req 2A: Identify LEAs that have not met annual measurable objectives for HQT?	0.542
Req 3D: address the needs of any subgroups of teachers identified in Requirement 1?	0.206
Req 4A: indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans	0.123
Req 4C: describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school	0.077
Req 5A: describe how and when the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year	0.001

As Table 10 shows, the lack of significance presented in the first hypothesis carries over to the second. Despite separating the specific pieces of evidence that seem to hinge on identifying teachers individually, none of the cross-tabs show the predicted relationship, nor do they show a significant relationship in any direction. While the analysis of each independent variable on its own provides a strong introduction to the role each measure plays in state implementation of these provisions, the next section will provide an even more sound analysis of these relationships through measures of multivariate regressions.

Results and Analysis of Multiple Regression Models

After analyzing the effect of each independent variable on its own, it is important to produce an analysis of the effect each variable has when considered simultaneously with the other three. For this I analysis, I first test the hypotheses that uses the total number of evidence presented as the dependent variable. I expect that states that have a unified Democratic government in 2006, a unique teacher identifier in place in 2001, and subject matter testing as part of its certification in 2001 will present more pieces of evidence. I do not have strong expectations about the effect of teacher unions in this regression analysis. There is reason to believe that greater union presence will encourage the presentation of fewer supporting items, considering my research has identified the NEA as opposing 13 of the supporting items, and only supporting 9. However, union presence may not actually affect planned state implementation of these provisions. The designations made regarding the opinions of the NEA on each piece of evidence were constructed from NEA stances that do not refer directly to the revised plans. Therefore, I am uncertain about the effect union presence will have in this analysis. To test the

previously mentioned hypotheses and to learn more about the effect of union presence, I ran a linear regression analysis.

Table 11: Linear Regression for Total Evidence Presented

	Unstandardized Coefficients (β)
Democratic Control H/S/G	6.85** (3.30)
Any Collection of a Teacher ID before 2002?	-0.61 (3.01)
State Requires Subject Matter test for license before 2002	-0.01 (3.04)
NEA Members/1000 residents	-0.08 (0.26)
	Adjusted R ² 0.016
	F-test 1.194
	N 50

*Note: *p<.10, **p<.05, ***p<.01. The dependent variable is the total number of supporting items presented in each state plan. Standard errors are listed below each Beta value in parentheses.*

The results of this test show that, when analyzed simultaneously, the only significant independent variable is a Democratically unified state government. While this information is useful in explaining the total number of evidence presented, we need to consider a different method of analysis for the individual regressions for each piece of evidence. Hypothesis 8 states that each independent variable will play a significant role in predicting the variation in the dependent variable. As stated in the data and methods section, with a range from 0-1, we must use logit regressions to explain the variation in the dependent variable. I ran logit regression analyses for each of the pieces of evidence requested in each requirement.

Table 12 (pg. 69) presents the results from the analysis of the pieces of evidence considered in Requirement 1. The first requirement demands that the state plans must

provide a detailed analysis of the core academic subject classes in the State that are currently *not* being taught by highly qualified teachers. There are 5 pieces of evidence that the federal government considered in the evaluation of this requirement. The only piece of evidence that is significantly explained by any of my proposed independent variables is requirement 1B, which asks “Does the analysis focus on the staffing needs of school that are not making AYP? Do these schools have high percentages of classes taught by teachers who are not highly qualified?”

The second requirement, presented in Table 13 (pg. 69), asks for information on HQT status in each local education agency (LEA), and the steps the state education agency (SEA) will take to ensure that each LEA has plans in place to assist teachers who are not highly qualified to attain HQT status as quickly as possible. Two of the three pieces of evidence are explained significantly by having a Democratically unified state government: Requirement 2A which asks “Does the plan identify LEAs that have not met annual measurable objectives for HQT?” and Requirement 2B which asks “Does the plan include specific steps that will be taken by LEAs that have not met annual measurable objectives?”

Table 12: Factors affecting presentation of evidence within Requirement 1

	Requirement 1A	Requirement 1B	Requirement 1C	Requirement 1D	Requirement 1E
Unified In Democratic Control	1.51 (1.15)	2.10* (1.56)	0.98 (.93)	.	0.04 (.85)
Unique Teacher Identifier in place in 2001	0.03 (.79)	-0.39 (.77)	-0.44 (.78)	-0.44 (.80)	0.06 (.78)
State Certification used Subject Matter testing in 2001	0.65 (.83)	-0.06 (.81)	-0.16 (.80)	-0.18 (.87)	0.78 (.79)
Union Presence	0.043 (.07)	0.04 (.07)	0.04 (.07)	-0.04 (0.08)	0.03 (.07)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N = 50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Missing values (1D) occur when the independent variable predicts the dependent variable perfectly. Models are logit regressions run in SPSS. Requirement 1 states that the revised plan must provide a detailed analysis of the core academic subject classes in the State that are currently not being taught by highly qualified teachers.

Table 13: Factors affecting presentation of evidence within Requirement 2

	Requirement 2A	Requirement 2B	Requirement 2C
Unified In Democratic Control	1.83* (.97)	2.33* (1.19)	.
Unique Teacher Identifier in place in 2001	-0.33 (.80)	-1.12 (.82)	-1.17 (.89)
State Certification used Subject Matter testing in 2001	-0.91 (.81)	-0.66 (.84)	-0.95 (.94)
Union Presence	-0.07 (.07)	-0.06 (.07)	-0.08 (.08)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N = 50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Missing values (2C) occur when the independent variable predicts the dependent variable perfectly. Models are logit regressions run in SPSS. Requirement 2 states that the revised plan must provide information on HQT status in each LEA and the steps the SEA will take to ensure that each LEA has plans in place to assist teachers who are not highly qualified to attain HQT status as quickly as possible.

Table 14 (pg. 72) presents the results from the analysis of the pieces of evidence considered in Requirement 3. The third requirement asks for information on the technical assistance, programs, and services that the SEA will offer to assist LEAs in successfully completing their HQT plans, particularly where large groups of teachers are not highly qualified, and the resources the LEAs will use to meet their HQT goals. Only the final piece of evidence within this requirement, which asks “Does the plan for the use of available funds indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?” is explained significantly by the independent variable that accounts for states that are unified in Democratic control.

The fourth requirement asks states to describe how the SEA will work with LEAs that fail to reach the 100 percent HQT goal by the end of the 2006-07 school year. This requirement focuses on accountability, and presents 4 pieces of evidence for reviewers to look for in the state plans. Table 15 (pg. 72) presents the findings for this requirement. As you can see in Table 15, of these 4 pieces of evidence, the last two are explained significantly by the independent variable for a Democratically unified state government. Both 4C, which asks for a description of how the SEA will monitor LEA compliance in implementing their own plans, and 4D, which describes the action SEA will take if LEAs do not meet HQT and AYP goals, are significantly explained by this variable.

The fifth requirement deals with the HOUSSE provisions, and there are 2 pieces of evidence corresponding to this requirement, one asking how the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the 2005-2006 school year, and the other asking how the State will limit the use of these

provisions after the 2005-2006 school year. Neither piece of evidence is explained by any of my independent variables, as shown in Table 16 (pg. 73).

Finally, the sixth requirement deals with the requested “equity plan” that ensures that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children. There are 5 pieces of evidence associated with this requirement, and according to my analyses, none of the variance in the presentation of these pieces of evidence can be explained through the proposed independent variables. These values are shown in Table 17 (pg. 73).

After analyzing each independent variable on its own, and then simultaneously through the use of regression equations, I am confident in concluding that the majority of my hypotheses lack statistical support. The only independent variable I found that significantly predicts the presentation of a piece of evidence is a Democratically unified state government. Likewise, this is the only independent variable that significantly explains the variation in my dependent variable. These results have limited implications on policy, and will be explored in the final, concluding chapter of this thesis.

Table 14: Factors affecting presentation of evidence within Requirement 3

	Requirement 3A	Requirement 3B	Requirement 3C	Requirement 3D	Requirement 3E	Requirement 3F
Unified In Democratic Control	1.32 (1.16)	0.40 (.93)	1.61 (1.24)	1.48 (.96)	1.27 (.96)	1.80* (0.94)
Unique Teacher Identifier in place in 2001	-0.21 (.82)	0.55 (.79)	-0.45 (.84)	-0.62 (.77)	-0.99 (.82)	-0.94 (0.81)
State Certification used Subject Matter testing in 2001	0.14 (.85)	0.45 (.81)	-1.05 (.90)	0.30 (.78)	-0.94 (.83)	-1.39 (.85)
Union Presence	0.04 (.08)	0.04 (.07)	-0.10 (.08)	-0.08 (.07)	-0.09 (.07)	-0.04 (0.07)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N=50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Models are logit regressions run in SPSS. Requirement 3 states that the revised plan must include information on the technical assistance, programs, and services that the SEA will offer to assist LEAs in successfully completing their HQT plans, particularly where large groups of teachers are not highly qualified, and the resources the LEAs will use to meet their HQT goals.

Table 15: Factors affecting presentation of evidence within Requirement 4

	Requirement 4A	Requirement 4B	Requirement 4C	Requirement 4D
Unified In Democratic Control	1.53 (1.18)	1.67 (1.15)	2.24* (1.21)	2.02* (1.15)
Unique Teacher Identifier in place in 2001	-0.28 (.81)	0.4 (.78)	-0.24 (.79)	0.31 (.78)
State Certification used Subject Matter testing in 2001	-0.46 (.84)	0.62 (.81)	1.18 (.84)	0.28 (.82)
Union Presence	-0.06 (.07)	0.01 (.07)	-0.04 (.08)	0.03 (.07)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N=50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Models are logit regressions run in SPSS. Requirement 4 states that the revised plan must describe how the SEA will work with LEAs that fail to reach the 100 percent HQT goal by the end of the 2006-07 school year.

Table 16: Factors affecting presentation of evidence within Requirement 5

	Requirement 5A	Requirement 5B
Unified In Democratic Control	0.63 (.92)	0.88 (.89)
Unique Teacher Identifier in place in 2001	-0.07 (.78)	0.39 (.81)
State Certification used Subject Matter testing in 2001	0.13 (.80)	-0.23 (.81)
Union Presence	0.02 (.07)	0.1 (.07)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N = 50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Models are logit regressions run in SPSS. Requirement 5 states that the revised plan must explain how and when the SEA will complete the HOUSSE process for teachers not new to the profession who were hired prior to the end of the 2005-06 school year, and how the SEA will discontinue the use of HOUSSE procedures for teachers hired after the end of the 2005-06 school year

Table 17: Factors affecting presentation of evidence within Requirement 6

	Requirement 6A	Requirement 6B	Requirement 6C	Requirement 6D	Requirement 6E
Unified In Democratic Control	0.37 (.85)	0.89 (.85)	-0.29 (.86)	1.31 (.89)	0.84 (.86)
Unique Teacher Identifier in place in 2001	0.43 (.76)	0.29 (.86)	0.96 (.80)	0.72 (.89)	0.7 (.81)
State Certification used Subject Matter testing in 2001	0.11 (.77)	-0.52 (.82)	0.74 (.80)	1.09 (.92)	0.66 (.82)
Union Presence	-0.03 (.07)	-0.04 (.07)	-0.05 (.07)	-0.02 (.08)	-0.02 (.07)

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. $N = 50$ for each model. The dependent variable is whether or not the piece of evidence was present in the plan. For each model β is reported, followed by the standard error in parentheses. Models are logit regressions run in SPSS. Requirement 6 states that the revised plan must include a copy of the State's written "equity plan" for ensuring that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children.

Chapter 5: Conclusion

In general, it seems that the proposed independent variables do not have as large a role in the planned implementation of this specific federal teacher policy as originally believed. Consistently throughout the analysis of the difference of mean NEA scores between those states who presented a piece of evidence and those states who did not, there was very little difference in NEA membership and hardly any significance in the relationships. This implies that the strength of the NEA in states does not affect whether or not states planned to implement federal policy in a way that coincides with the interests of the NEA. Likewise, there are no significant differences in evidence presented between those states that had subject matter testing as a part of their state certification before NCLB and those state that did not. This variable did not account for any explanation of the variance in the dependent variables. The story is the same for the presence of a unique teacher identifier, showing no significance in predicting neither the presentation of evidence nor the explanation of variance. The composition of elected state officials, however, does offer some explanation for the variance in the dependent variable.

This statistically significant relationship offers support for my partisanship hypotheses. The relationship supports the claim that those states with a Democratic majority in their state legislature in addition to having a Democratic governor present revised plans for implementation of the HQT provisions that are more complete than the plans presented by states that did not have a state government unified in Democratic control. My analysis shows that states that were unified in Democratic control present, on average, about 6.5 more supporting items than those states that were not unified in

democratic control. This finding supports the ideas discussed in earlier chapters, suggesting that Democrats are more likely to support federal intervention in state education policies. In this case, their support is shown through complying with the guidelines laid out by the Department of Education.

While these data are clear in their conclusions, there are a few reasons we must consider as to why most of the hypotheses lack support. There are points of consideration for each of the independent variables. For example, what I argue gives the teacher unions such power in implementation, their many local members, may also be a limitation in this portion of my research. I was only able to find reports and information about the NEA policies as an entire organization. The truth is, however, the on the ground union members, those who would actually be influencing the implementation of this law, may not subscribe to the overt and explicit statements made by the national office (Manna 2004). Beyond that, it is clear that the national NEA did not exactly have clear opinions on all of the analyzed pieces of evidence. I was able to refer to the NEA member handbook, which publishes the resolutions passed by members each year, and was unable to locate stances on these specific details.

My research of the NEA and its opinions of NCLB returned the most information regarding collective bargaining and adversity to standards for students. The fact that the Highly Qualified Teacher provision is not a main arguing point of the NEA certainly accounts for the lack of evidence present in my findings. I was able to ask Bess Keller, an assistant editor for *Education Week* who covers issues surrounding the teaching profession (including professional issues, unions, teacher education, and professional

development), about my findings during an interview in February, 2009. Keller suggested that the union opposition to NCLB could inspire hesitance in using the language of the law. Instead of proposing reforms to the law as it stands, suggesting acceptance of the law's merits, unions may feel it important to speak in a language separate from the language of the law. By proposing measures that do not acknowledge the merits of the existing law they oppose, unions can present a stronger platform of ideas and values (Keller 2009). This explanation provides a likely explanation for the distinct language offered by the NEA and my inability to relate its stance to these revised plans.

There are important considerations that must be taken into account for the other independent variables as well. I chose the presence of subject matter testing to represent the starting point for state teacher policy. While the reasons for choosing this measure as an indicator of state teacher policy are sound, they do not necessarily trump other methods of measuring this concept. This consideration also applies to my measure of data capabilities. While I chose this measure because of its close ties to teachers specifically, data systems incorporate measures of variables well beyond unique teacher identifiers. While current data systems are given grades and analyzed in response to these various aspects of measurement, I needed a measure of data systems in 2001.

Additionally, it is important to remember that these are simply the results of one study. This conclusion certainly does not disprove theories of principal-agent relationships, nor does it absolutely diminish the effect that teacher unions, data, or state policy play in implementing policy. This study shows the relationship between teacher union presence in states, and the planned state implementation of *this specific* federal law.

However, my measure of both the independent and dependent variables is not the only way to measure these variables. While using the reviewed state plans as a measure for state implementation of federal law is logical and served the purposes for this work, there are other ways to judge how federal policy is being carried out in the states. For example, instead of focusing on how states plan to implement the HQT provisions I could have created a measure for how well each state is adapting its teacher policies to what the Department of Education requests. The Department of Education prepares a study on state implementation of this provision each year, offering comments on how states are faring in this section of the law. Another possibility would have been to use the percentage of teachers within each state who are deemed highly qualified. The trouble with this measure, however, is that states are not consistent in how they define what it means to be highly qualified.

Because I decided against these alternative measures, my conclusion is that these variables do not influence the way that states *plan* to implement this federal policy. There is no analysis of how or if these plans were actually followed by the states. Further research may be able use the steps actually taken by states, perhaps analyzing policy change at the state level. Additionally, a shortcoming in my research was the use of dichotomous variables. For each requirement I could only present if the evidence was present or absent. Future research may be able to identify a broader scale of implementation of each requirement.

The theoretical set up of this research posits that the weak relationship between the federal government and the states leaves the door open for other influencing factors.

This paper simply tests four of those potentially influencing factors. Other factors that may have had a larger effect on state implementation of this policy include the funding states have for these programs, or the variance in district types present in each state. States that provide more funding for teacher programming may be offering more time and resources to this aspect of state education policy, suggesting that they may be better apt to implement this federal provision. Likewise, states that are comprised of similar districts may have an easier time planning to implement this provision. A state that has all rural districts will be able to adapt its teacher policy to a model that will work for districts across the state. On the other hand, if a state has many different types of districts, it may be hard to develop a statewide plan that will be effective for each district.

Future research should focus on using theoretical analysis and existing literature to suggest other potential factors that may have an influence on how states implement this provision of NCLB. Further, researchers should test the relationship between these other influencing factors and state implementation of this federal policy. With the introduction of additional variables that could have potential impact on the implementation process, researchers will be able to control for certain situations and produce a stronger connection between the independent and dependent variables. This research may even be able to provide additional insight to the relationships I have uncovered in my own analysis.

While most of my hypotheses were not supported by the research done in this paper, the research still has significant implications. By compiling each state's reviewed plan for the implementation of the Highly Qualified Teacher provision of NCLB, I

present a standard form through which each state's implementation process can be compared. Table 2 presents each piece of evidence, and the number of states that presented or were missing that evidence from their plan. This table provides further support for the existing research that describes state teacher policy, and the drastic differences that exist from one state to the next.

This large variance in teacher policies has many political implications. There is no conclusion made about whether or not increased federal intervention is a step in the right direction. The debate about the role of the federal government in education will certainly not be solved by this research. It does suggest, however, that *if* the federal government continues to extend its influence into education policy, increased regulation needs to occur. While regulation can be a bureaucratic nightmare, there is no use in passing federal legislation that depends so strongly on state implementation if that implementation is not going to be monitored.

With increased research concerning the factors that affect how states implement federal teacher policy, more concrete recommendations may be made. While the importance of providing all children with highly qualified teachers is something that is agreed upon across the board, the way to achieve this goal is not as easily reconciled. The federal government has been accused of extending its reach further and further into state and local education policies. However, they it allows for such drastically different interpretation of their policies by the states, how much of an impact are these federal laws actually making at a local level? With increased analysis of the situation at hand,

interested parties may find that there is the potential for compromise with a shared focus on providing only the highest quality instruction.

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Appendix

The following appendix includes Alabama's Revised State Plan. This is an example of the plans that each state submitted for review to the Department of Education. The following item informs my dependent variables.

Reviewing Revised State Plans

Meeting the Highly Qualified Teacher (HQT) Goal

State: ALABAMA

Date: 7/27/06

Peer Review Panel's Consensus Determination:

The plan is acceptable

The plan has the deficiencies described below.

Comments to support determination:

Requirements 1-5 were met based on the evidence that was presented to support them. Requirement 6 was not met because the plan does not include a written equity plan ensuring that poor or minority students are not taught by inexperienced, unqualified or out of field teachers at higher rates than other children.

This plan takes bold steps to address the problems of attaining 100% highly qualified teacher goal. The plan provides evidence and specific data to support proposed interventions and strategies.

There is a comprehensive management information system that provides data on individual teachers, classrooms, and LEA's allowing a comprehensive analysis of the HQT needs at each level. This system allows the state to collect, analyze the data needed

to address the provisions of the plans and use data to target appropriate intervention strategies to high needs areas including schools not meeting AYP and HQT goals.

The plan delineates multiple (research based) strategies and provides examples of how it will target interventions to help LEA's schools and teachers meet the HQT goals. The state provides technical support to LEA's schools and teachers by providing coaches and using regional structures to deploy services.

The plan outlines the appropriate use of federal funds to help LEA's schools and teachers reach AYP and HQ goals. It targets funds to schools not making AYP and not meeting goals for attaining 100% HQT.

The plan is strengthened by including appropriate sanctions and consequences for those schools that fail to meet HQT requirements.

Requirement 1: The revised plan must provide a detailed analysis of the core academic subject classes in the State that are currently *not* being taught by highly qualified teachers. The analysis must, in particular, address schools that are not making adequate yearly progress and whether or not these schools have more acute needs than do other schools in attracting highly qualified teachers. The analysis must also identify the districts and schools around the State where significant numbers of teachers do not meet HQT standards, and examine whether or not there are particular hard-to-staff courses frequently taught by non-highly qualified teachers.

Y/N/U/NA	Evidence
Y	Does the revised plan include an analysis of classes taught by teachers who are not highly qualified? Is the analysis based on accurate classroom level data?
Y	Does the analysis focus on the staffing needs of school that are not making AYP? Do these schools have high percentages of classes taught by teachers who are not highly qualified?
Y	Does the analysis identify particular groups of teachers to which the State's plan must pay particular attention, such as special education teachers, mathematics or science teachers, or multi-subject teachers in rural schools?
Y	Does the analysis identify districts and schools around the State where significant numbers of teachers do not meet HQT standards?
Y	Does the analysis identify particular courses that are often taught by non-highly qualified teachers?

Y=Yes; N=No; U=Undecided; NA=Not applicable

Finding:

- Requirement 1 has been met
 - Requirement 1 has been partially met
 - Requirement 1 has not been met
 - Additional information needed to make determination
- _____ Date Requested _____ Submission Deadline

Supporting Narrative:

There is a data system to collect information and monitor progress. It is a comprehensive system that collects state, district and school information and is accessible through a web site. In addition there is a plan to conduct on-site visits to ensure accuracy of the data.

ADE is specific regarding the classes taught by teachers who are not highly qualified. It has put a focus on schools that can be identified as those with the most serious needs.

The reviewers applaud the effort to provide technical assistance but encourage the use of research/evidence based models that have been demonstrated to work in the settings that ADE is attempting to improve.

It is noted that ADE does not include specific timelines for its work, even in the tasks scheduled for one school year. The timelines might enhance planning to assure that the technical assistance being provided is done in a timely manner.

Requirement 2: The revised plan must provide information on HQT status in each LEA and the steps the SEA will take to ensure that each LEA has plans in place to assist teachers who are not highly qualified to attain HQT status as quickly as possible.

Y/N/U	Evidence
Y	Does the plan identify LEAs that have not met annual measurable objectives for HQT?
Y	Does the plan include specific steps that will be taken by LEAs that have not met annual measurable objectives?
Y	Does the plan delineate specific steps the SEA will take to ensure that all LEAs have plans in place to assist all non-HQ teachers to become HQ as quickly as possible?

Y=Yes; N=No; U=Undecided

Finding:

- Requirement 2 has been met
 - Requirement 2 has been partially met
 - Requirement 2 has not been met
 - Additional information needed to make determination
- _____ Date Requested _____ Submission Deadline

Supporting Narrative:

The ADE is commended for its serious commitment to helping all schools in the state but also recognizing the importance of focusing on those with the greatest needs. To boldly say that no LEA's have met the measurable objectives and are building a plan of support around that information is commendable.

Requirement 3: The revised plan must include information on the technical assistance, programs, and services that the SEA will offer to assist LEAs in successfully completing their HQT plans, particularly where large groups of teachers are not highly qualified, and the resources the LEAs will use to meet their HQT goals.

Y/N/U	Evidence
Y	Does the plan include a description of the technical assistance the SEA will provide to assist LEAs in successfully carrying out their HQT plans?
Y	Does the plan indicate that the staffing and professional development needs of schools that are not making AYP will be given high priority?
Y	Does the plan include a description of programs and services the SEA will provide to assist teachers and LEAs in successfully meeting HQT goals?
Y	Does the plan specifically address the needs of any subgroups of teachers identified in Requirement 1?
Y	Does the plan include a description of how the State will use its available funds (e.g., Title I, Part A; Title II, Part A, including the portion that goes to the State agency for higher education; other Federal and State funds, as appropriate) to address the needs of teachers who are not highly qualified?
Y	Does the plan for the use of available funds indicate that priority will be given to the staffing and professional development needs of schools that are not making AYP?

Y=Yes; N=No; U=Undecided

Finding:

- Requirement 3 has been met
 - Requirement 3 has been partially met
 - Requirement 3 has not been met
 - Additional information needed to make determination
- _____ Date Requested _____ Submission Deadline

Supporting Narrative:

There is a good technical assistance plan with detailed description including community partnerships and on site visits.

The reviewers recommend that it be mandatory to request support instead of voluntary for superintendents in districts with fewer than 75% of teachers highly qualified. The

state needs to be more prescriptive in these serious situations, particularly because it has an overall good plan to alleviate the problem.

The reviewers suggest that ADE add more sophisticated technology such as web based conferencing, to enhance the effectiveness and efficiency of school improvement coaches.

In the Alabama Reading Initiative, the reviewers recommend the inclusion of formative assessment and student achievement data to evaluate the effectiveness of the project.

Low-performing schools should be required to join the Alabama Math, Science and Technology Initiative.

The plan is specific about how federal funds will be used to achieve the goals but does not describe how state funds would be used to support it.

Requirement 4: The revised plan must describe how the SEA will work with LEAs that fail to reach the 100 percent HQT goal by the end of the 2006-07 school year.

Y/N/U	Evidence
Y	Does the plan indicate how the SEA will monitor LEA compliance with the LEAs' HQT plans described in Requirement 2 and hold LEAs accountable for fulfilling their plans?
Y	Does the plan show how technical assistance from the SEA to help LEAs meet the 100 percent HQT goal will be targeted toward LEAs and schools that are not making AYP?
Y	Does the plan describe how the SEA will monitor whether LEAs attain 100 percent HQT in each LEA and school: <ul style="list-style-type: none"> • in the percentage of highly qualified teachers at each LEA and school; and • in the percentage of teachers who are receiving high-quality professional development to enable such teachers to become highly qualified and successful classroom teachers?
Y	Consistent with ESEA §2141, does the plan include technical assistance or corrective actions that the SEA will apply if LEAs fail to meet HQT and AYP goals?

Y=Yes; N=No; U=Undecided

Finding:

- Requirement 4 has been met
 Requirement 4 has been partially met
 Requirement 4 has not been met
 Additional information needed to make determination
 _____ Date Requested _____ Submission Deadline

Supporting Narrative:

ADE has a data system and plans in place to monitor the information on an ongoing basis. This effort is commendable. The plan imposes consequences to maintain a sense of urgency to comply with the requirements for HQT.

Requirement 5: The revised plan must explain how and when the SEA will complete the HOUSSE process for teachers not new to the profession who were hired prior to the end of the 2005-06 school year, and how the SEA will limit the use of HOUSSE procedures for teachers hired after the end of the 2005-06 school year to multi-subject secondary teachers in rural schools eligible for additional flexibility, and multi-subject special education who are highly qualified in language arts, mathematics, or science at the time of hire.

Y/N/U	Evidence
Y	Does the plan describe how and when the SEA will complete the HOUSSE process for all teachers not new to the profession who were hired before the end of the 2005-06 school year?
Y	Does the plan describe how the State will limit the use of HOUSSE after the end of the 2005-06 school year to the following situations: <ul style="list-style-type: none"> ○ Multi-subject secondary teachers in rural schools who, if HQ in one subject at the time of hire, may use HOUSSE to demonstrate competence in additional subjects within three years of the date of hire; or ○ Multi-subject special education teachers who are new to the profession, if HQ in language arts, mathematics, or science at the time of hire, may use HOUSSE to demonstrate competence in additional subjects within two years of the date of hire.

Y=Yes; N=No; U=Undecided

Finding:

- Requirement 5 has been met
 - Requirement 5 has been partially met
 - Requirement 5 has not been met
 - Additional information needed to make determination
- _____ Date Requested _____ Submission Deadline

Supporting Narrative:

The ADE uses the HOUSSE appropriately.

Requirement 6: The revised plan must include a copy of the State’s written “equity plan” for ensuring that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children.

Y/N/U	Evidence
N	Does the revised plan include a written equity plan?
	Does the plan identify where inequities in teacher assignment exist?
	Does the plan delineate specific strategies for addressing inequities in teacher assignment?
	Does the plan provide evidence for the probable success of the strategies it includes?
	Does the plan indicate that the SEA will examine the issue of equitable teacher assignment when it monitors LEAs, and how this will be done?

Y=Yes; N=No; U=Undecided

Finding:

- Requirement 6 has been met
 - Requirement 6 has been partially met
 - Requirement 6 has not been met
 - Additional information needed to make determination
- Date Requested Submission Deadline

Supporting Narrative:

There is no written equity plan to ensure that poor or minority children are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than other children.