

Piecing Together the Teacher Policy Landscape: A Policy Problem Typology

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Background/Context: Evidence suggests that teachers are a critical resource in realizing high-quality educational opportunities for all students. However, many school systems across the country continue to employ large numbers of teachers who, by most indicators, do not fit into the category of “high quality.” Although policy makers at various levels of government have responded to the teacher staffing problem, we know very little about the range of strategies being used or how these strategies are packaged together.

Purpose/Objective: This article presents and applies a three-dimensional typology designed to organize and analyze the array of teacher policies across education systems. This analytic tool extends current approaches to studying teacher policy in three ways. First, our approach recognizes the multidimensional nature of the teacher staffing problem and the array of policy responses to it. Second, we acknowledge that multiple levels of the system are simultaneously at work to address teacher staffing and teacher quality, so that each policy at any given level is part of a broader web of policies being employed across the educational system. Finally, our study emphasizes the importance of considering teacher policy “packages” to understand what is currently being done to address critical staffing issues and what needs to be done if we are serious about staffing all classrooms with highly qualified teachers.

Research Design: We developed the typology using data from a national scan of teacher pol-

icy, based on a broad review of scholarly literature, state and district documents and Web sites, a national data set, and interviews with education leaders at the national, state, and district levels. We tested and refined this tool using data from multilevel, nested case studies of teacher policy in three states: Maryland, New York, and Connecticut.

Conclusions/Recommendations: *The study makes both conceptual and empirical contributions. Conceptually, we have developed and tested a useful tool for policy makers and researchers to examine the range of policies and resources being employed to address the various dimensions of the teacher staffing problem. Empirically, this study provides information on the constellations of teacher policies across levels of the education system in three states and presents findings on the range and reach of teacher policies at the state, district, and school levels.*

INTRODUCTION

Evidence suggests that teachers are the most important school resource required to produce high-quality educational opportunities for all students (Darling-Hammond & Post, 2000; Ehrenberg & Brewer, 1995; Ferguson, 1991, 1998; Haycock, 2000; National Center for Education Statistics [NCES], 2000; National Commission on Teaching and America's Future, 1996; Phillips, Crouse, & Ralph, 1998; Sanders & Rivers, 1996). In fact, ensuring that all classrooms have a qualified teacher is a fundamental requirement for realizing the high standards emphasized and measured by federal and state standards-based reforms and high-stakes accountability systems.

The link between teacher quality and student achievement implies that teacher policy is a promising direction for realizing goals of productivity, equity, and adequacy in public education. Not surprisingly, the past two decades hold numerous examples of efforts aimed at enhancing teacher quality.¹ However, the issues of teacher supply, recruitment, distribution, and retention present significant challenges for many states, districts, and schools and pose considerable risks for ensuring educational equity and adequacy for all students. In some areas of the country, there is a shortage or pending shortage of qualified teachers, particularly in specific subject areas. Further, the distribution of qualified teachers to classrooms nationwide is inconsistent and uneven. Many school systems across the country continue to employ large numbers of teachers who, by most indicators, do not fit into the category of "high quality" (Carroll, Reichardt, & Guarino, 2000). This problem is pronounced in urban high-poverty districts and schools where, arguably, high-quality teachers are needed most (Choy, Henke, Alt, Medrich, & Bobbitt, 1993; Haycock, 2000; Ingersoll, 1999). Moreover, many schools face significant challenges

recruiting qualified teachers (Murphy & DeArmond, 2003) and retaining these teachers once they are hired (Hanushek, Kain, & Rivkin, 2004; Lankford, Loeb, & Wyckoff, 2002; NCES, 2005; Smith & Ingersoll, 2004). Clearly, the nature of the teacher staffing problem is both complex and multidimensional. Policy makers wrestle with the concurrent challenges of how to expand the pool of qualified teacher candidates, recruit teachers to the schools where they are needed most, distribute teachers in equitable and efficient ways, and retain qualified teachers over time. The multiple aspects of the problem suggest that a multidimensional policy response is required to address teacher staffing concerns.

Education policy makers at every level have responded to the teacher staffing problem by putting in place policies, practices, and resources aimed at improving teacher quality and placing high-quality teachers in every classroom. Federal legislation defining “highly-qualified teachers,” state-defined criteria for teacher certification, district-based salary schedules, and school-based hiring strategies are all operating simultaneously. Further, policies like professional development traverse multiple levels of the system. At any one time, different levels of government target resources at the teacher staffing problem through multiple policies and practices. Although the policy actors tend to focus, sometimes narrowly, on one particular component of the staffing issue, their combined efforts yield unique combinations, or “packages,” of policies that address the problem in different ways.

Despite the policy response, across levels of government, to the teacher staffing problem, we know very little about the range of strategies being used or how these strategies are packaged together. This article presents a three-dimensional typology that we developed to organize and analyze the array of teacher policies across education systems. We used data from a national policy scan to develop the typology, and we used data from a multilevel three-state case study of teacher policy to test and refine this tool.

This analytic tool extends current approaches to studying teacher policy in three ways. First, our study recognizes the multidimensional nature of the teacher staffing problem and the array of policy responses to it. Second, the study acknowledges that multiple levels of the system are simultaneously at work to address teacher staffing and teacher quality, so that each policy at any given level is part of a broader web of policies being employed across the educational system. Finally, the study emphasizes the importance of considering teacher policy “packages” to understand what is currently being done to address critical staffing issues and what needs to be done if we are serious about staffing all classrooms with highly qualified teachers.

After a discussion of the teacher labor market, the article describes our analytic framework: the teacher policy typology. We then review the methods and data used to test our typology through case studies of teacher policies in three states: Maryland, New York, and Connecticut. Next, we describe our case study findings. We conclude with an appraisal of our typology, a discussion of our findings, and a description of the limitations of this study and the next steps in our research.

THE TEACHER LABOR MARKET

Labor markets presumably work according to the basic economic notions of supply and demand. When the market is in equilibrium, the supply of labor with a particular set of qualifications is equal to the demand for that labor, and a fair compensation package is negotiated between employers and employees. Although the total compensation package includes a variety of rewards, such as wages, retirement and health benefits, and nonmonetary rewards (e.g., satisfaction, working conditions, future employment prospect), often wages are used as a response to an imbalance in the supply of and demand for employees of a given quality. When the supply of labor is inadequate, firms offer higher wages and other forms of compensation, broadly conceived, to attract the employees they need to remain productive and competitive. Conversely, wages go down in contexts in which there is excess supply in the quantity of labor needed for production goals. Likewise, wages and other forms of compensation can be used to affect the quality of the workforce. Further, various components of the compensation package may work as substitutes for one another. For instance, firms may offer relatively high wages for a particular type of employee to offset poor working conditions specific to that job or workplace. The basic principle is to identify the most cost-effective combination of investments (wages vs. other forms of compensation that are attractive to desired employees) to maintain the quality and quantity of employees needed to meet production goals.

Although these basic principles of labor economics are appealing from an analytic perspective, applying them to public education requires several special considerations. First, education is public. For a variety of reasons—including political, civic, social, and economic goals—Americans have long recognized the many societal benefits that result from having an educated population. Because educating individuals enhances the quality of life for everyone, Americans publicly invest in education.² As a result, salaries are negotiated not solely through a competitive market but rather through a set of processes that often prioritize political interests over direct market forces, limiting the power of the market to use

wages to optimize labor inputs.

Second, unions often play a strong role in determining teacher compensation plans and negotiating other provisions for their membership, including workload restrictions and the process by which teachers are assigned to schools in a district. The strength and power of unions vary considerably across school districts, resulting in different effects on teacher compensation and working conditions. For instance, in districts with strong union presence, district and union officials agree on salary schedules, which typically pay teachers based on objective criteria like education units, university degrees, and years of teaching experience (Odden & Kelley, 2002). To the extent that these criteria are not directly linked with teacher performance, wages are ineffective as a tool to influence the quality of the teacher labor force. District–union agreements also have the power to limit teacher supply by imposing tougher standards for entry into the profession. Such policies can limit supply and thereby increase wages without corresponding increases in quality.³

A third factor that affects the teacher labor market is the lack of definitive empirical evidence regarding the indicators of teacher quality. Although education leaders, policy makers, researchers, and the general public have long recognized the importance of having good teachers, research linking specific teacher qualifications with their performance has been mired with inconsistent findings and inconclusive results (Rice, 2003b). In other words, hiring and compensation policies rely heavily on a set of qualifications that has not been conclusively linked with performance or outcomes. The lack of knowledge about the education production process, specifically with respect to teachers' knowledge and skills, has limited policy makers' ability to use qualifications and associated salaries to enhance teacher quality. For this reason, some have argued strongly that financial incentives should be used to reward teachers for effectiveness (e.g., pay for performance, hiring bonuses) and thereby increase both the quality of the teacher labor force and, ultimately, the efficiency of public education. However, research evidence on whether financial incentives are cost-effective strategies for improving teacher recruitment and retention is limited. Concerns about the validity and reliability of current tools to measure teacher performance have limited the widespread use of strategies that link teachers' pay with their performance in the classroom.⁴

Fourth, the role of wages as a primary driver for teachers' job decisions needs to be weighed alongside other factors. Money does matter. Relative compensation has been found to be a relevant factor in individuals' decisions to teach (Hanushek & Pace, 1995; Mont & Rees, 1996; Murnane, Singer, & Willett, 1989; Theobald, 1990). Further, evidence suggests that

low salaries contribute to teachers' decisions to quit (Baugh & Stone, 1982; Ingersoll, 2001). However, wages are not the only consideration and, in fact, are often not the top priority in teachers' decisions about where to work (Farkas, Johnson, & Foleno, 2000). Additional factors—like school and class size, working conditions, student behavior, school location, collegiality, sense of community, autonomy, a desire to make a difference—have been found to influence teachers' job decisions (Bobbitt, Faupel, & Burns, 1991; Boyd, Lankford, Loeb, & Wyckoff, 2005; Johnson, 2004; Roellke & Meyer, 2003; Theobald; Weiss, 1999). These findings underscore the importance of considering both salary and non-pecuniary job attributes when examining and constructing policies to attract and retain high-quality teachers.⁵

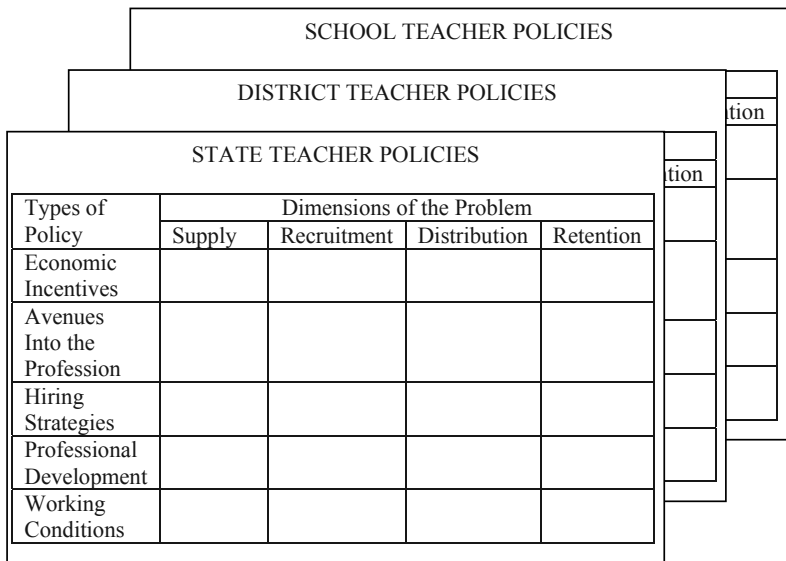
Given these findings, it is clear that the goal of staffing all schools with qualified teachers will not be accomplished solely through the use of wages. Consequently, research efforts to identify the policies and resources needed to staff all schools with qualified teachers (or to improve teacher quality) must broaden their scope beyond teacher salary as a proxy for teacher quality.⁶ Although wages are one factor that arguably could be used more productively to affect the quantity and quality of teachers, the challenge of staffing all schools with high-quality teachers requires multiple policy options that extend well beyond teacher compensation. Compensation-based reform may be a necessary, but not sufficient, condition for improving teacher quality.

ANALYTIC FRAMEWORK: A TEACHER POLICY TYPOLOGY

A key goal of this study is to provide a tool for policy makers and analysts to understand the array of strategies and investments in place to influence staffing. The first step in our work was to conduct a national scan of teacher policies, based on a broad review of scholarly literature, state and district documents and Web sites, a national data set, and interviews with education leaders at the national, state, and district levels (see Rice, 2003a; Kolbe & Rice, 2006). Through an iterative process of document review and interviews, we identified a long list of teacher policies currently in play. Using this information, we developed a three-dimensional teacher policy typology to categorize teacher policies and link them with the various dimensions of the teacher staffing problem across the education system. The rows in the typology capture the various *types of strategies* we found to be in use across states and districts: economic incentives, avenues into the profession, teacher hiring process, teacher professional development, and working conditions (Rice). The columns of the typology represent four *dimensions of the staffing problem*: ensuring

an adequate supply of qualified teachers, recruiting teachers to districts and schools where they are needed most, distributing teachers in efficient and equitable ways, and retaining teachers in schools. The third dimension of the template captures the policy landscape at each *level of the education system*: state, district, and school. The typology is illustrated in Figure 1.

Figure 1. Three-Dimensional Teacher Typology



TYPES OF STATE, DISTRICT, AND SCHOOL TEACHER POLICIES

The typology’s first dimension identifies five broad and sometimes overlapping categories of strategies that states, districts, and schools use to address different aspects of the teacher staffing problem: (1) economic incentives, (2) avenues into the profession, (3) hiring strategies, (4) professional development, and (5) working conditions. The categories were identified through a comprehensive scan of policies used by educational agencies nationwide (Rice, 2003a; Kolbe & Rice, 2006) and validated and refined using data from our multilevel case studies in three states. Although the categories help conceptually characterize the complex teacher policy landscape, in practice, policy makers across levels of the education system simultaneously draw on policies from these categories,

resulting in complex sets of policy “packages.” The following sections describe the typology’s five categories of teacher staffing policies.

Economic Incentives

Increasing teacher compensation and offering other types of economic rewards are frequently cited policy options for enticing teachers to enter and remain in the teaching workforce (e.g., Odden & Kelley, 2002). These strategies take many forms, including salary schedule modifications (e.g., across-the-board percentage increases in teacher salary); salary enhancements (e.g., permanent salary increases in exchange for teaching in difficult-to-staff schools); incentive payments, stipends, and cash bonuses (e.g., “merit pay” and one-time bonuses for National Board Certification); tuition grants and remission for teacher training and professional development; in-kind and direct benefits (e.g., housing assistance, tuition remission); and retirement benefit waivers (Kolbe & Rice, 2006). The use of economic incentives as tools for improving teacher recruitment and retention is grounded in research evidence that suggests that salaries and benefits play an important role in attracting and retaining teachers. For instance, empirical evidence indicates that salary and benefit levels can be a key factor in teachers’ decisions to enter into and remain teaching, and to move between districts and schools (Brewer, 1996; Gritz & Theobald, 1996; Hanushek et al., 2004; Ingersoll, 2001; Lankford et al., 2002). Emerging evidence also suggests that annual incentive payments or one-time bonuses may be an effective tool for recruiting and retaining teachers in subject-shortage areas who teach in disadvantaged schools (Clotfelter, Glennie, Ladd, & Vigdor, in press), and further evidence suggests that these effects may be closely tied to other interventions (e.g., alternative certification programs and mentoring and induction support; Liu, Johnson, & Peske, 2004). However, the long-term impacts of these types of interventions on teacher recruitment and retention have yet to be determined (Guarino, Santibanez, Daley, & Brewer, 2004).

Working Conditions

Along with wages and benefits, nonpecuniary features, including school context and organizational environment, influence teachers’ employment decisions. School characteristics, such as the proportion of low-income and minority students, have been shown to influence teachers’ decisions to leave a particular teaching position (Carroll et al., 2000; Darling-Hammond, 1997; Shen, 1997), and there is some evidence that

teachers in low-performing schools transfer to high-performing schools at higher rates than teachers in other schools (Hanushek et al., 2004). Working conditions, including the amount of planning time, workload and class size, student behavior and discipline, influence over school policy and participation in decision making, availability of necessary materials, and collegial opportunities also have been found to influence teacher retention (Ingersoll, 2001; Ingersoll & Alsalam, 1997; Johnson & Birkeland, 2003; Kelly, 2004; Kirby, Berends, & Naftel, 1999; Stockard & Lehman, 2004; Weiss, 1999). In addition, teachers' labor market decisions may be influenced by their feelings of efficacy in the classroom (Liu et al., 2004). Teachers who feel supported in the workplace—psychologically, instructionally, and administratively—also may be more likely to remain in teaching (Odell & Ferraro, 1992; Shen; Weiss). For instance, Smith and Ingersoll (2004) found that district- and school-based programs that provide induction and mentoring support for new teachers (within their first 3 years of teaching) may positively influence teacher recruitment and retention, particularly in difficult-to-staff schools. In addition to mentoring and induction programs, school leadership and administrative support contribute to teachers' decisions to remain in a school (Shen; Weiss).

Districts and schools have developed a range of strategies directed at improving teachers' working conditions. These strategies may take the form of efforts directed at improving school organization and management; school safety and student discipline; parental involvement; teacher autonomy, influence, and control; teacher collegiality and support; instructional organization and classroom conditions; mentoring opportunities; and new teacher induction, training, and workload management (Kolbe & Rice, 2006). The first three types of strategies target the broader school environment, and the remaining strategies are aimed more directly at teachers' feelings of efficacy and satisfaction with their day-to-day work.

Professional Development Opportunities

Prospects for personal and professional growth within the workplace are a key dimension of teachers' satisfaction with their professional development. As such, considerable resources have been invested by states, districts, and schools in providing teachers with professional development opportunities (see, for example, Hirsch, Koppich, & Knapp, 2001). In fact, these opportunities have been such a critical policy response to the teacher staffing problem that our typology identifies professional development as a separate category of strategies, apart from the broader dis-

discussion of strategies focused on teachers' working conditions. In our scan of professional development policies, we identified several types of strategies: opportunities for continuing education; opportunities for professional development; targeted assistance for teachers pursuing continuing education and professional development; and rewards and incentives for continuing education and professional development (Kolbe & Rice, 2006). Although many of these policies are directed at improving teacher retention, districts and schools with a culture of professional growth also may be more attractive to new teachers (Smith & Ingersoll, 2004).

Avenues Into the Profession

Alternative routes into the teaching profession have emerged as a popular policy response to persistent shortages of qualified teachers, particularly in localized areas such as urban schools and in subject specialties (e.g., math, science, and special education). Alternate routes to teacher certification consist of both new recruitment strategies for full teacher certification and "alternative certificates," which are substantially different from the regular approach to obtaining a teaching certificate in terms of the standards and methods for teacher preparation and entry (Darling-Hammond, 1990). For instance, alternative routes to certification may take the form of (1) postbaccalaureate programs for midcareer entrants that approximate university-based preparation programs but put the candidate in the classroom sooner, and (2) experiential programs (often lasting 9–18 months) that provide a minimum level of training based on the assumption that students will pick up the needed skills on the job and that are accompanied by relatively short summer training experiences (Hirsch et al., 2001). Most alternative certification policies are generated at the state level because states, for the most part, are responsible for establishing and enforcing teacher certification standards. These alternate routes into the profession, however, differ in purpose, context, and program elements (Dill, 1996), making it difficult to draw broad conclusions about their effectiveness as tools for improving teacher supply, retention, and quality (Johnson, Birkeland, & Peske, 2005).

Teacher Hiring Process Reforms

In addition to altering the certification process, other efforts have been made to streamline the hiring process for teachers. We identified five

basic types of hiring strategies that districts and schools have used to improve the likelihood of recruiting qualified teachers for their classrooms: license and tenure reciprocity, streamlined hiring processes, partnerships with teacher preparation programs, features that improve job offer attractiveness, and increased visibility and outreach (Kolbe & Rice, 2006). Because experienced teachers generally lose their tenure and credits for years of service when they change jobs, some school systems have begun to offer experienced teachers tenure or years of service reciprocity in exchange for relocating to schools in their district. Other policies allow districts to accept out-of-state teaching credentials or certification for otherwise qualified teacher applicants. Further, districts and schools have increasingly streamlined their recruiting and hiring processes (e.g., Web-based job applications). Strategic relationships between districts and teacher preparation programs also have formed a pipeline for qualified new teacher applicants. In addition, more and more districts use a range of strategies to improve the attractiveness of their job offers to new teachers (e.g., job offer timing and open contracts).

DIMENSIONS OF THE STAFFING ISSUE

Through our research, we have learned that the challenge of staffing all schools with qualified teachers is a multidimensional problem requiring a multidimensional policy response. We capture this in the typology's second dimension that links specific strategies with the multiple challenges associated with staffing all schools with quality teachers: (1) ensuring an adequate supply of qualified teachers, (2) recruiting teachers to districts and schools where they are needed most, (3) distributing teachers in efficient and equitable ways, and (4) retaining teachers in schools. Although these dimensions are not mutually exclusive, they are conceptually distinct. In fact, the distinction among closely related components of the problem is often a function of the level of the system where policy is made. For instance, recruitment and retention policies are largely internal efforts that schools and districts use to secure staff. However, these "local" recruitment and retention efforts are affected by external policies at higher levels of the educational system. States have an opportunity to influence the supply and distribution of teachers across districts. Similarly, districts can adopt policies that affect the supply and distribution of teachers across schools. Each of these dimensions of the problem is described in more detail below.

Supply

A major challenge to state- and district-level administrators is ensuring an adequate supply of qualified teachers to fill new and vacant positions within their boundaries. Teacher shortages occur in a labor market where demand exceeds supply. Assuming fixed requirements for teacher quality, demand is a function of factors like student enrollment, class size, teaching load, and budgetary constraints (Guarino et al., 2004). Although evidence suggests that there is an adequate supply of qualified teachers nationally, localized shortages continue to persist in specific subject areas, grade levels, and school types (e.g., rural vs. urban; U.S. Department of Education, 2005). In some cases, teacher shortages are a direct result of the broader labor market. For instance, the supply of math teachers may suffer to the degree that mathematics majors can secure more attractive jobs in other industries in a particular labor market. As a result, policy makers at the federal, state, and district levels have implemented policies to expand the supply of qualified teachers by decreasing the opportunity costs associated with becoming a teacher (e.g., alternative certification routes) or remaining a teacher (e.g., increased financial rewards).

Recruitment

Even in a context of adequate supply, schools and districts may struggle with recruiting teachers. Recruitment policies are those that draw from the available supply of teachers to meet the specific staffing needs of a particular context. Ultimately, recruitment aims to attract teachers with certain qualities and qualifications to schools and districts that need them most. A relevant distinction worth noting is that between policies aimed at recruiting “highly qualified teachers” as defined by No Child Left Behind (NCLB), and those aimed at recruiting high-quality teachers. An emphasis on attracting highly qualified teachers focuses on externally defined qualification requirements (e.g., as specified by national or state policy makers), whereas an emphasis on high quality focuses on factors perceived to be linked with a teacher’s effectiveness within the state, district, or school context.

Distribution

Within any unit—whether states within the nation, districts within states, or schools within districts—teachers are sorted based on teacher preferences and available opportunities. This sorting often leaves poor,

urban, and disadvantaged schools with less experienced and less qualified staff. For instance, teachers' location preferences put poor schools at a disadvantage in terms of their ability to hire well-qualified teachers (Lankford et al., 2002). This uneven distribution of teacher quality provides an opportunity for national, state, and district leaders to construct policies to influence teachers' decisions about where to work. Most school systems, however, prioritize teachers' years of experience as the main criterion for voluntary transfers. Within this context, state- and district-level administrators are limited to distributional policies that provide incentives for teachers to choose to work in a particular setting. The ultimate goal of such policies is to encourage a more efficient and equitable distribution of teachers.

Retention

Research has documented that district and school leaders must be concerned with more than just getting teachers in the door. High teacher turnover rates in low-performing schools have resulted in a "churning" or "revolving door" that is associated with substantial administrative costs to both the school and the district. Researchers interested in teacher attrition have made the important distinction between "stayers," who remain in the same school over time, "movers," who transfer to another school but remain in the teaching profession, and "leavers," who leave the teaching profession altogether (Ingersoll, 2001; Theobald & Michael, 2002). From a district's perspective, movers are generally less problematic than leavers, because leavers create vacancies that must be filled. From a school's perspective, there is no difference between movers and leavers; both result in the need to hire a new teacher. It is important to note that turnover is not always a bad thing; attrition of low-quality teachers who are replaced by high-quality ones is arguably a good outcome. However, holding quality constant, high rates of teacher turnover impose significant costs on districts and schools.

LEVELS OF THE EDUCATION SYSTEM

The third dimension of our typology recognizes that teacher policies are implemented and supported at multiple levels of the education system. At the national level, federal efforts to improve teacher quality are evident in NCLB's "highly qualified teacher" requirement and in corresponding federal grants to states and districts that support teacher education and professional development. States also have taken an active role in teacher staffing policy as replenishing and distributing the

teacher workforce has become more difficult (Hirsch et al., 2001). Increasingly, state education agencies provide guidance and support for teacher induction, professional development, and other strategies designed to advance teacher and, ultimately, student success (Hirsch et al.). Many states have become involved in encouraging shifts in the teacher labor market by offering economic incentives and rewards to teachers who work in low-performing schools and in subject-shortage areas such as math, science, and special education (Hirsch et al.; Meyer, 2002). The district role traditionally focused on teacher recruitment and hiring but has expanded to attend to issues that surround retention, professional development, and, in some cases, the distribution of teachers across schools. Schools too have taken steps to address different aspects of the teacher staffing problem. Increasingly, schools offer programs focused on teacher mentoring and induction, enhancing professional development opportunities, and improving working conditions. The third dimension of our typology accounts for policy strategies at each level of the education system. This allows analysts and policy makers to view the full array of strategies at work, to examine the investments being made at each level of the system, to understand the degree to which various levels of the system are more focused on particular dimensions of the policy problem, and to analyze the degree of alignment in goals and investments across levels of the system.

DATA AND METHODS

Initial development of the typology was based on our national scan of teacher policy. We then tested and refined the typology through multi-level case studies of teacher policy in three states: Maryland, New York, and Connecticut.

SITE SELECTION AND DATA COLLECTION PROCESSES

Using a nested case study design, we examined teachers within schools, schools within districts, and districts within states. We purposively selected the states, districts, and schools for this study. The sites chosen for this study are not intended to be nationally representative but provide interesting contexts to begin to develop a better understanding of the complexity of teacher policy across levels of the education system and to test our policy typology. Our three states are all located on the eastern

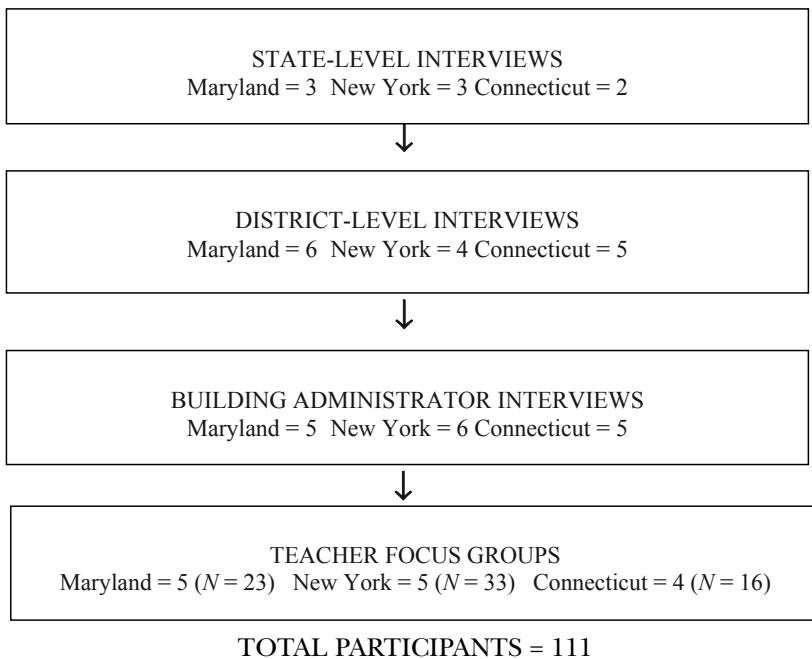
seaboard and reflect variability in education context and teacher policy climate. For instance, we were particularly interested in the large county-based school district context in Maryland, the high-profile legal challenges surrounding the adequacy of education in New York State, and the high salary context of the neighboring state of Connecticut. Also important, the researchers had strong connections with policy makers in these three states, providing good access to data and essential professional connections to aid in recruiting state, district, and school administrators to participate in the intensive data collection required in this study.

In each state, we identified two districts based on recommendations from state officials, document review of current policies, analysis of data on teacher staffing, and guidance from members of our expert panel composed of national leaders of teacher and administrator organizations.⁷ In two of our states (Maryland and Connecticut), we chose neighboring districts that compete for the same pool of teachers. Within each district, we selected up to three schools based on district recommendations and extant data on teacher staffing patterns.⁸ In all cases, our goal was to identify districts and schools that face teacher staffing challenges but that are perceived by leaders in the system as employing interesting or promising strategies.

Four sources of data inform the analysis: (1) documents providing information on teacher recruitment and retention policies, and investments in those policies at the state, district, and school levels; (2) extant data on teacher staffing patterns in the selected schools and districts; (3) interviews with state, district, and school administrators about their views of the teacher quality challenge and the kinds of investments they are making in policies to staff schools with quality teachers; and (4) focus groups with teachers in selected schools to understand the critical issues related to their decisions about where to work, and to assess their perceptions of the impact of policies and practices on teacher recruitment and retention. Throughout the data collection process, we made adequate provisions to protect the privacy of the subjects and to maintain the confidentiality of identifiable information.⁹ Figure 2 portrays our data collection activities in the three states.

In addition to taking field notes, when possible, we audiotaped the interviews and focus groups. In cases in which interview respondents declined the request to be taped, we took careful and extensive notes to document responses during the interviews. Willingness to be taped was a

Figure 2. Summary of Data Collection



requirement for participation in the focus groups. Immediately following the interviews and focus groups, we transcribed the proceedings and organized our data into a typology for each site. In some cases, it was not clear exactly where a particular policy fit in the typology, and some policies legitimately fit in several places. For instance, an induction program for new teachers can be considered both a recruitment and a retention tool. Decisions about where to place policies in the typology were made based on evidence from the interviews and documents. We then used the typologies to construct a case profile for each state (see Rice, Roellke, & Sparks, 2006).

Our data collection activities included a number of checks for bias and error. We used open-ended, semistructured interview protocols, took detailed notes during our interviews, promptly transcribed and edited the interviews, and followed up with respondents for clarification as needed (Patton, 1990). We cross-checked information using multiple sources of data from each site, including multiple interviews and public documents. In addition, study participants were given the opportunity to

review the case profiles, and several members of our research team reviewed each typology and case profile for accuracy, clarity, and consistency.

DESCRIPTIONS OF THE CASE STUDY SITES

Next, we provide a brief overview of the state, district, and school sites included in our study.¹⁰ Table 1 summarizes key characteristics of our sites. All data are from the 2004–2005 academic year unless otherwise noted. The three states in our study—Maryland, New York, and Connecticut—reflect a range of characteristics of interest in this study. All three states face teacher shortages and staffing issues but differ in the specific circumstances surrounding those challenges. Maryland is home to more than 56,000 teachers across 24 large and often diverse county-based school districts. Maryland ranks 12th among the states in average teacher salary. Comparatively, New York is quite large, with more than 217,000 public school teachers employed by 700 school districts. On average, teacher salary in the state of New York ranks sixth in the nation. Connecticut is home to 42,000 teachers across 166 districts. With a 20-year history of emphasizing teacher quality, Connecticut’s average teacher salary ranks first in the nation.¹¹ The “neighboring” status of Connecticut and New York is of interest because these states may compete for the same pool of teachers. Taken together, these three states provide an opportunity to test our typology against an array of teacher policies across sites with different problems and perspectives on how to staff all schools and classrooms with high-quality teachers.

Maryland Sites

We selected two large neighboring districts in the Washington DC metropolitan area of Maryland: Montgomery County Public Schools (MCPS) and the Prince Georges County Public Schools (PGCPS). Each district faces challenges associated with serving a diverse community—rural and urban, high and low poverty—and as neighboring districts, they often compete for the same teacher candidates. The districts are comparable in size, both ranking in the top 20 school districts in the nation; each operates about 200 schools and enrolls almost 140,000 students. In the 2004–2005 academic year, MCPS had 18 Title I schools. More than 36% of enrolled students qualified for free and reduced meals (FARMS), and about 3% were classified as English language learners (ELLs; MCPS, 2005). MCPS teacher compensation averaged \$40,542 for beginning

Table 1. Description of Multilevel Case Study Sample

<i>State Characteristics</i>	Maryland		New York	Connecticut	
Number of Districts	24		700	166	
Number of teachers	56,149		217,000	42,000	
National teacher salary rank ¹	12th		6th	1st	
<i>District Characteristics</i>	Montgomery	Prince George	NYC Region 9	New Haven	Westport
Number of schools in district	197	205	179	49	8
Enrollment (2004–05 SY)	139,393	136,095	105,768	20,759	5,306
Number of Title I Schools	18	65	141	26	0
% of FARMS Students	36.4%	46.4%	66.0%	69.0%	1.3%
Number (and %) of English language learners	12,843 (3.2%)	7,064 (4.4%)	13,842 (13.1%)	2,142 (10.4%)	81 (1.5%)
Beginning average teacher salary	\$40,542	\$38,307	\$42,512	\$38,053	\$39,974
Maximum average teacher salary	\$90,529	\$80,774	\$93,416	\$79,912	\$88,762
Per pupil expenditures	\$10,974	\$8,403	\$11,786 ²	\$13,104	\$14,073
Total number of schools included in sample	3	2	4	2	2
Elementary	2	1	0	1	0
Middle	1	1	1	0	1
Secondary	0	0	3	1	1

1 National rank for *average* teacher salary.

2 This is 2003–2004 information. NYC Department of Education does not currently have more current information available.

teachers and reached a maximum average of \$90,529 for veteran teachers with advanced degrees. Teacher salaries combined with other classroom expenditures resulted in a \$10,974 per-pupil expenditure for academic 2004–2005 (Maryland State Department of Education, 2005). We sampled three schools within MCPS: two Title I elementary schools and one middle school.

In 2004–2005, PGCPS included 65 Title I schools, which is consistent with the relatively high proportion of FARMS students (46.4%) enrolled in the district. PGCPS serves 7,064 ELL students, just over 4% of PGCPS students. Teacher compensation in PGCPS is slightly lower than the neighboring MCPS. The average beginning teacher salary is \$38,307, and the average salary of a veteran teacher with an advanced degree is \$80,774. Per-pupil expenditures are lower in PGCPS than in MCPS: The district spends \$8,403 per pupil, which is \$2,571 less than the per-pupil

expenditure in neighboring MCPS. We sampled two schools in PGCPS, a Title I elementary school and a middle school.

New York Sites

Incorporating four administrative units, New York City's Region 9 spans lower Manhattan north to 59th Street, stretches through the Upper East Side and East Harlem, and crosses into the South Bronx. We further narrowed our inquiry to a specific network of schools located in Manhattan and the Bronx. Region 9 includes 179 schools that serve over 105,000 students, including 141 Title I schools. Sixty-six percent of students in Region 9 qualify for FARMS, and nearly 14,000, or 13.1%, are ELL students. Student performance within the region also is quite varied because the area includes pockets of both the highest and lowest academic achievement in the state. Teacher salaries range from an average beginning salary of \$42,512 to a maximum salary of \$93,416. In 2004–2005, the per-pupil expenditure in the district averaged \$11,786. We sampled four schools within Region 9: (1) a high school in East Harlem, (2) a middle/high school located in the Chelsea section of Manhattan, (3) a high school on the Upper East Side, and (4) a high school in the Bronx.

Connecticut Sites

We selected two neighboring and highly contrasting districts within Connecticut, the New Haven Public Schools (NHPS) and the Westport Public Schools (WPS). Similar to the districts selected in Maryland, our Connecticut districts are neighboring jurisdictions that vary in terms of student characteristics and resource levels. The New Haven Public School system comprises 49 schools, including 26 Title I schools. Of the 20,759 students enrolled in the district, 69% are eligible for FARMS, and 10.4% are ELL students. Teacher compensation in NHPS is the lowest among the districts in our study. The average beginning teacher salary is \$38,053, and the average maximum salary is \$79,912. In 2004–2005, NHPS spent \$13,104 per pupil. We sampled two schools within the NHPS: one intradistrict magnet elementary/middle school, and one intradistrict magnet high school. The magnet elementary/middle school was identified by NHPS district officials as an appropriate site to study because of its chronic teacher supply challenges. As a contrasting example, NHPS district officials suggested the magnet high school for its ability to attract to teacher candidates relative to other high schools in the district.

The Westport Public School System is the smallest district in our case study, with only eight schools serving 5,306 students in 2004–2005. WPS did not operate a Title I school in the study year, and less than 2% of its students qualified for either FARMS or ELL services. Average teacher salaries in the district range from \$39,974 for beginner teachers to \$88,762 for veteran teachers with an advanced degree. In 2004–2005, per-pupil expenditures were \$14,073. We sampled two schools within WPS: the comprehensive high school within the district, and a middle school within the district.

FINDINGS: THE TEACHER POLICY LANDSCAPE

Tables 2, 3, and 4 present typologies summarizing the teacher policies at the state, district, and school levels, respectively.¹² For each site, the table indicates (with a ✓) the presence of specific types of policies directed at particular dimensions of the staffing problem. Although we observed unique challenges across various state, district, and school contexts, our data reveal a remarkable degree of consistency in the types of policy responses used by educational agencies both across and within the states. In the following sections, we use the typology framework to synthesize our findings on teacher policy across the three state systems in our study. We first present the general themes that we observed. We then describe how various levels of the educational system tend to use specific types of policies to address different aspects of the problem. The next section discusses differences across states and across different levels of the system within states, and explores the extent to which contextual factors may account for those differences.

GENERAL THEMES ACROSS THE STATES

Two consistent themes emerged from the study's cross-state comparisons. First, we found a comprehensive approach to teacher policy across levels of the education systems that we studied. Second, we identified several pervasive policies that are used at every level of the system. It is important to note, however, that although our typology is a useful tool for identifying these patterns and themes, it does not provide information on the intensity, reach, or effectiveness of the policies observed.

Comprehensive Approaches to Teacher Policy

We found that education systems tend to use comprehensive approaches to teacher policy, drawing on different types of strategies to address mul-

multiple dimensions of the problem. Although policy makers at each level of the systems were often focused on a particular dimension of the problem, taken together, the multiple levels of the education system within each state appear to employ a set of policies that use all five types of strategies to deal with all four dimensions of the teacher policy issue. In other words, in each state, every type of policy is used, and every dimension of the problem is addressed at some level of the system. Although this finding reflects some degree of comprehensiveness in the sense that education systems draw on multiple resources and policy strategies to tackle the various dimensions of the teacher staffing issue, this observation does not account for the level of investment being made by school systems, the degree to which policy provisions are actually used by schools and teachers, or the quality of the interventions being implemented. Further, this observation is not meant to suggest that policy makers are thinking comprehensively about the teacher staffing issue. We did not find a well-orchestrated five-course meal, but rather a potluck of sorts. To address the most pressing dimensions of the staffing problem faced at each level of the system, additional research is needed to examine the nature of these policy packages and the degree to which they are appropriately configured and adequately supported.

Pervasive Policy Emphases

As we compared policies across states, we found that all three states shared several policy emphases that could be observed across all levels of the system. First, all three states created opportunities to expand the supply and improve the distribution of teachers by providing alternative routes into the teacher profession. Some of the policies are aimed at filling shortages in difficult-to-staff schools (e.g., New York Region 9's summer internship program that provides training and placement for new teachers in New York City schools), whereas others are targeted at subject-area shortages (e.g., district partnerships with higher education institutions in Maryland to produce more math, science, and special education teachers). States tend to provide frameworks for NCLB-compliant alternative certification, and districts use those frameworks to implement the specific programs. In addition, our interviews revealed considerable variability in the extent to which district and school administrators recruit and hire teachers from these alternative routes. As one Connecticut state official described, "many districts actively recruit alternate route certification teachers because of the expectations that they have a high level of content knowledge." Taken together, our data show that education leaders at all levels of the system are involved in some way

with alternative certification programs.

A second and related policy strategy that we observed across all three states was an effort on the part of education administrators across levels of the system to develop and nurture partnerships with institutions of higher education (IHEs) to promote better preservice and in-service professional development opportunities for teachers. In many cases at the state and district levels, these partnerships were the heart of the alternative certification programs. But we also observed a different kind of relationship wherein school and district administrators worked with teacher training programs at IHEs to influence the kinds of teachers prepared and to “advertise” themselves as good places to work. One Maryland district administrator’s comments are representative: “For recruitment, the district needs to go out and build relationships with universities so that they know who we are. I want to make it a part of our practice to be visible to the universities.” Another district leader in Maryland talked about the possibility of working with universities to influence the preparation of more teachers for subject shortage areas: “I would want to work closer with the universities and say counsel people who come to your school ahead of time so that they know what the critical shortage areas are so that they know how to direct their efforts.”

A third pervasive policy emphasis observed across our sites is a set of hiring strategies used to recruit teachers to shortage areas. Such policies were evident at the state, district, and school levels in all our sites. The specific strategies included state and district databases, online application submission procedures, early recruitment calendars, open contracts offered to teachers willing to take jobs in difficult-to-staff schools, widespread advertisement, international recruitment, and job fairs.

Fourth, in all three states, we documented strong support for professional development as a mechanism to recruit and retain teachers. Although we found variability in the degree of emphasis that administrators place on professional development for teachers, this set of policy strategies is an important theme in all three states, and the state efforts to promote professional development permeate all levels of the system. These policies took the form of professional development schools, teacher induction programs, district-sponsored professional growth systems, mentor and consulting teacher programs, and school-based staff development personnel.

Finally, across levels of the systems, we found policies designed to improve school working conditions, with the goal of recruiting qualified teachers and retaining them over time. State strategies included efforts to secure strong leadership in difficult-to-staff schools and support programs for new teachers. District and school policies emphasized a range

of strategies, including administrative support, time and space for staff development, planning time by grade and subject area, flexible approaches to teacher leave, minimal classroom interruptions, appreciation and recognition awards, instructional support personnel, smaller schools and classes, reduced loads, and improved safety and security measures.

TEACHER POLICIES AT VARIOUS LEVELS OF THE SYSTEM

The next step in our cross-state analysis involved looking across states for patterns in the degree to which the various levels of the systems tend to draw on similar types of policy strategies to address particular dimensions of the problem. In other words, do states draw on similar sets of policies aimed at similar dimensions of the issue? Do districts in Maryland hone in on the same aspects of the problem using the same sorts of policy strategies as districts in New York and Connecticut? How about schools? Several interesting patterns emerged from this portion of the analysis.

State Policy Trends

Table 2 reveals several interesting patterns in teacher policy at the state level. Generally speaking, we found that states tend to use economic incentives to address all four dimensions of the problem. In addition, states offer alternative avenues into the profession to address supply and distribution issues (i.e., to generate a larger pool for the hardest to staff areas in the state). We also found evidence that states emphasize professional development—with the goal of improving teacher retention—directly and indirectly by helping teachers to be more effective with respect to student learning outcomes. Finally, all three states in our study have policies to improve working conditions, with the goal of improving teacher retention.

District Policy Trends

Table 3 reveals several district-level policy trends addressing multiple dimensions of the problem. First, the districts in our sample use the alternative routes into the profession made available by the states to increase the supply and improve the distribution of teachers. We found numerous partnerships between district offices and higher education to expand the pool of qualified teachers, particularly for subject and geographic shortage areas. We also found that districts tend to use a variety of aggressive and innovative hiring strategies and attractive professional development

Table 2. State Policies Addressing Various Dimensions of the Staffing Problem

Dimension of the Problem	Maryland	New York	Connecticut
ECONOMIC INCENTIVES			
Supply		✓	✓
Recruitment	✓	✓	✓
Distribution	✓	✓	✓
Retention	✓	✓	✓
AVENUES INTO THE PROFESSION			
Supply	✓	✓	✓
Recruitment			✓
Distribution	✓	✓	✓
Retention		✓	✓
HIRING STRATEGIES			
Supply		✓	
Recruitment	✓	✓	✓
Distribution			
Retention			
PROFESSIONAL DEVELOPMENT			
Supply		✓	
Recruitment		✓	✓
Distribution		✓	
Retention	✓	✓	✓
WORKING CONDITIONS			
Supply			
Recruitment		✓	✓
Distribution	✓		
Retention	✓	✓	✓

opportunities to recruit teachers to their schools. Some district administrators emphasized the importance of these strategies as a way to compete with higher paying neighboring districts in order to attract prospective teachers. Finally, we found that districts use a variety of policy strategies to promote better retention. The dominant policies here include professional development opportunities, particularly efforts like mentoring and induction aimed at improving the effectiveness of new teachers in these educational settings; working conditions that offer support for teachers in the forms of time, collegiality, and expertise; and economic incentives for professional growth and development, such as tuition remission and rewards for National Board Certification.

Table 3. District Policies Addressing Various Dimensions of the Staffing Problem

Dimensions of the Problem	MD Districts		NY Districts	CT Districts	
	Montgomery County	Prince George's County	New York City Region 9	New Haven	Westport
ECONOMIC INCENTIVES					
Supply		✓	✓		
Recruitment	✓	✓	✓		✓
Distribution		✓	✓		
Retention	✓	✓	✓		✓
AVENUES INTO THE PROFESSION					
Supply	✓	✓	✓	✓	
Recruitment			✓	✓	
Distribution	✓	✓	✓	✓	
Retention		✓	✓	✓	
HIRING STRATEGIES					
Supply	✓	✓			
Recruitment	✓	✓	✓	✓	✓
Distribution	✓				
Retention			✓		
PROFESSIONAL DEVELOPMENT					
Supply	✓		✓		
Recruitment	✓	✓	✓	✓	✓
Distribution			✓		
Retention	✓	✓	✓	✓	✓
WORKING CONDITIONS					
Supply					
Recruitment		✓	✓		✓
Distribution					
Retention	✓	✓	✓	✓	✓

School Policy Trends

School-level teacher policies are shown in Table 4. Schools in our sample tended to address the issues of recruitment in their hiring practices and preferences. For instance, some school principals expressed a preference for alternatively certified teachers who came from specific teacher preparation programs. That is, a principal's experience with candidates from particular alternative route programs directly impacts her decision to return to this teacher candidate pool in the future. Principals from these schools were active in job fairs and Internet postings. Several schools also emphasized professional development opportunities and

Table 4. School Policies Addressing Various Dimensions of the Staffing Problem

Dimensions of the Problem	MD Schools		NY Schools	CT Schools	
	Montgomery County	Prince George's County	New York City Region 9	New Haven	Westport
ECONOMIC INCENTIVES					
Supply					
Recruitment			✓		✓
Distribution					
Retention			✓		✓
AVENUES INTO THE PROFESSION					
Supply			✓		
Recruitment			✓		
Distribution					
Retention			✓		
HIRING STRATEGIES					
Supply	✓				
Recruitment	✓	✓	✓	✓	✓
Distribution					
Retention			✓		
PROFESSIONAL DEVELOPMENT					
Supply			✓		
Recruitment	✓			✓	✓
Distribution			✓		
Retention	✓	✓	✓	✓	✓
WORKING CONDITIONS					
Supply					
Recruitment			✓		✓
Distribution					
Retention	✓	✓	✓	✓	✓

support as a strategy both to recruit and to retain teachers. Most notably, schools addressed a variety of working conditions in an effort to enhance recruitment and retention. These sorts of policies include release time for professional development and a variety of supports to make their work both more pleasant and more effective.

POLICY DIFFERENCES AND THE ROLE OF CONTEXT

In the midst of the general described trends, we also found distinct differences across states, districts, and schools in their approaches to teacher policy. Our data suggest that several contextual factors may help

explain these different approaches to teacher policy across and within the three states.

Teacher Supply

At the state level, teacher supply surfaced as an important factor. Although all three states face specific geographic and subject-area shortages, the nature of these shortages varied across our sites, resulting in observable differences in policy emphases across the states. Maryland, which faces a statewide teacher shortage, is more aggressive in its supply-side policies, such as alternative teacher certification. New York, a state with pronounced shortages in urban districts, is less concerned with overall teacher supply. The state supports policies that expand the supply of teachers for redistribution to New York City schools. Although Connecticut also offers supply-side policies, the more pronounced policy emphases in that state are teacher retention and professional development to affect student achievement.

These policy differences flag an important distinction between two closely related terms: *qualified* teachers and *quality* teachers. Our case studies suggest that districts and schools with a shortage of highly qualified teachers, as externally defined by federal and state criteria, are focused on policies to attract and retain teachers with those qualifications. In contrast, districts and schools that enjoy a surplus of teachers who meet the externally imposed requirements are free to draw on a different set of policies that emphasize teacher quality, as defined by their effectiveness (or potential effectiveness in the case of recruitment) in the particular context.

Environmental Factors: Safety, School Performance, and Collective Bargaining

Similarly, we identified contextual factors that affect school-level efforts to attract and retain teachers. For instance, many principals and teachers reported community safety as a problem that makes the school unattractive to prospective teachers and undermines the retention of existing teachers. Schools in our study have adopted a range of policies and practices to help combat such negative influences. For instance, one school in New York City considered offering all teachers free subway cards so that they could freely use public transportation rather than risk vandalism of their cars in the school parking lot.

Another example of a school contextual factor that affects recruitment and retention efforts is performance in their state's accountability system. Low performance can have multiple implications for staffing

schools. On one hand, chronic underperformance might make these schools eligible for additional state resources (fiscal and otherwise) to support their capacity to improve.¹³ These additional resources could have a positive effect on staffing to the extent that they are used to make teaching more attractive in these schools. On the other hand, persistent low performance could undermine teacher recruitment and retention efforts. Research shows that teachers tend to leave schools serving low-achieving students in favor of schools serving higher achieving ones (Lankford et al., 2002). One explanation for this is that teachers, like any professionals, want to be effective in their work. When they perceive that this is not possible, they find an environment where they can be more effective. Another explanation may be that high-stakes accountability is accompanied by rewards and sanctions that often focus on teachers as professionals, recognizing them for high student achievement and indicting them for poor student achievement (Rice & Malen, 2003). Embedded in such systems are implicit disincentives to work in underperforming schools.

A final contextual consideration is the role of unions and contractual agreements that result from collective bargaining. Although the union influence is beyond the scope of this study, we would be remiss if we did not recognize the impact of collective bargaining on the opportunities for states, districts, and schools to fully use various policy strategies, especially economic incentives (including salaries) and routes into the profession. Further, district–union agreements, particularly those related to seniority preference, limit administrators’ abilities to assign teachers to districts in ways that might realize a more efficient and equitable distribution of teachers. For instance, personnel directors in the New Haven, Connecticut, school district expressed concerns about a contract provision that allows veteran teachers the first choice for vacant teaching positions in the district. This sort of constraint on distributional policies was a concern across many of our sites.

CONCLUSIONS AND NEXT STEPS

By examining the teacher policy landscape across levels of the education systems in three states, this study makes both conceptual and empirical contributions. Conceptually, we have developed and tested a typology for organizing teacher policy in terms of the types of policies and the dimension of the problem they address at each level of the system. This typology is a useful tool for policy makers and researchers to examine the range of policies and resources being employed to address the various dimensions of the problem. Empirically, this study provides information

on the array of teacher policies across levels of the education system in three states. Using the teacher policy typology, we were able to draw a number of broad conclusions about the range and reach of teacher policies at the state, district, and school levels. Several key findings emerged from our analysis.

Comprehensive set of strategies that address multiple dimensions of the problem. We found that education systems tend to use comprehensive approaches to teacher policy, drawing on different types of strategies to improve teacher supply, recruitment, distribution, and retention.

Common policy emphases. Across our sites, we found a shared policy emphasis on strategies, such as expanding supply through alternative certification, targeting policies for better distribution of teachers, providing professional development for recruitment and retention, and forming partnerships with higher education.

Dominant policies at each level of the system. Shared state policies included economic incentives and alternative avenues into the profession to address supply and distribution issues. Shared district policies were alternative routes into the profession made available by the states to increase their supply, innovative hiring strategies and attractive professional development opportunities to recruit teachers, and a variety of policy strategies to promote better retention. Shared school policies included hiring practices to enhance recruitment, professional development to recruit and retain teachers, and a variety of working conditions to promote retention.

Policy differences and contextual factors. Contextual factors such as teacher supply, student performance, safety, and collective bargaining agreements are associated with the policies observed in districts and schools.

In addition, our descriptive analysis confirmed several key characteristics of our typology and gives rise to next steps in this research agenda. First, the data confirm that staffing all schools with qualified teachers is a complex, multidimensional policy problem. Next steps in our work analyze the degree of alignment between policies and dimensions of the problem. In other words, policies should be designed to fit the circumstances of local communities. For example, if a district has a sufficient overall supply of qualified teachers but faces shortages in particular schools within the district, targeted policies that distribute teachers to those difficult-to-staff schools are necessary. If the problem is one of high teacher turnover in schools serving large concentrations of disadvantaged students, then the policy configuration might invest heavily in retention strategies targeted at those schools. We are particularly interested in the degree to which policy makers tend to draw on low-cost policies even in cases in which the problem requires high-cost solutions

(e.g., using salary bonuses—a recruitment policy—in a context in which retention is the most salient problem). In addition, we will explore our preliminary finding that some districts and schools can focus their policy efforts on *teacher quality* (i.e., effectiveness), whereas others must direct their policy and resources toward meeting externally imposed standards of *teacher qualifications*.

Second, our data confirm the notion that even in states with an overall surplus of qualified teachers, local and subject-area shortages exist, and policies can be targeted to address those shortage areas. The descriptive case study findings presented in this article suggest that some efforts are made to address these geographic and subject-area shortages through teacher supply and distribution policies. Further work will examine the types of policies that tend to be targeted and the contexts in which that targeting tends to occur.

Third, data from these three states confirm that multiple teacher policies across levels of the system in any state can be thought of as policy packages that interact in complex ways with one another. In general, although we observed interaction among the levels of the education system in these three states (e.g., states offered alternative avenues into the profession, districts form partnerships with higher education to provide those alternatives to prospective teachers, and schools hire those teachers), we also noted distinct differences across levels in the dimensions of the problem that they addressed and the policy strategies that they employed to do so. The data presented here suggest that different levels of the education system have different resources, opportunities, and constraints that shape the kinds of policies they adopt. Our ongoing work will examine the nature of policy packages and the degree to which policies interact with one another in positive and negative ways. In particular, we are interested in identifying “coherent packages” of policies that are complementary and simultaneously address multiple dimensions of the problem.

Finally, this work is limited to findings from a small sample of states, districts, and schools. Additional work is needed to further test the typology and descriptive findings on teacher policy in other state, district, and school contexts. Although the typology provides a landscape of the policies in play across the education system, it does not account for the level of investment, degree of utilization, or quality of the intervention. Additional research is needed to understand the cost and effectiveness of various policy packages for different kinds of educational systems.

Acknowledgement

Rice developed the typology presented in this article (Rice, 2003). Rice, Roellke, and Sparks conducted the multilevel case studies (Rice et al., 2006). Kolbe assisted with the literature review on teacher policies (Kolbe & Rice, 2006). We are grateful for research support from MetLife Foundation and the Economic Policy Institute, and we take full responsibility for the content of this article.

Notes

1. Prominent examples include the National Commission on Excellence in Education (1983); the Carnegie Foundation for the Advancement of Teaching, (Boyer, 1983); The Holmes Group (1986); the National Commission on Teaching and America's Future (1996); and the No Child Left Behind (NCLB) Act (U.S. Department of Education, 2001).
2. The positive externalities associated with education compel at least some level of public involvement in the provision of education. If left to individual consumption in a private market, education would be underproduced.
3. This is the case unless the professional standards are, in fact, indicative of quality.
4. It should be noted that many teacher compensation plans throughout the country evidence performance-based components (Odden & Kelley, 2002).
5. This mix of monetary and nonmonetary job attributes is characteristic of every labor market. Based on individual preferences, people select themselves into different occupations and places of employment for a variety of reasons (e.g., pay, schedule, location, desire to make a difference). Although this process of matching preferences to job characteristics is not unique to education, it is important for policy makers to understand which factors tend to drive the job choices to teachers.
6. See, for example, Harris (2001) and Lakdawalla (2002).
7. Our expert panel consisted of seven individuals representing national teacher, administrator, and education policy organizations. This group met twice during the course of this study to participate in discussions about the teacher staffing problem, provide guidance on site selection, and offer suggestions on our research questions and study design.
8. The New York context is a bit different from the others. We selected Region 9 of New York City as our district, and four schools in four different subdistricts within Region 9.
9. Each participant in the study signed an informed consent agreement that describes the study goals and methods and his or her role in providing data for the study. We assigned each participant an identification code so that the researchers could attribute responses to specific individuals without using participant names. Individuals' names and other identifiable information were not used in written transcripts, coded data, or written reports or papers describing the study or its findings. However, because we identify the states and districts used in the study, it may be possible to identify participating district and state administrators given the public nature of their positions. Although teachers and principals provided personal information on their decisions about where to work and their perceptions of state, district, and school policies, the information provided by district and state administrators is more public in nature (i.e., describing public policies and investments in them).
10. For a more detailed description of our sites, including the completed case profiles, see Rice, Roellke, and Sparks (2006).

11. In 1986, Connecticut adopted a comprehensive policy approach to teacher quality with the statewide Educational Enhancement Act (EEA). The first stage of teacher quality enhancement under the EEA involved making teacher salaries comparable with those in fields requiring similar levels of education and training.

12. The complete teacher policy typologies for each site in our sample are presented in Rice et al. (2005).

13. However, it is important to note that additional resources alone are sometimes insufficient to increase capacity for improvement (Malen & Rice, 2004).

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