California Principals' Resources: Acquisition, Deployment and Barriers

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<u>Executive Summary</u>

I. Overview. The principal's leadership is viewed as pivotal under a variety of reform models. Policies that aim to raise efficiency by moving discretion down to principals, limiting labor contracts, or awarding fresh resources to schools and/or districts rest on principals' capacity to deploy fungible dollars and human resources. However, little is known about the range of monetary and human resources that principals acquire and influence, how they allocate these resources, and what barriers they confront in acquiring and deploying resources inside their schools.

This study attempts to provide a better understanding of principals' fiscal and labor resources and how they acquire and utilize them by addressing five core questions: (1) What are the background characteristics of California principals, and how do these attributes compare with principals in other states? (2) What educational goals do principals pursue and prioritize? (3) What types of monetary, human, and informational resources do principals acquire? (4) How do principals deploy resources within their schools? (5) What support and constraints do principals experience, and from which actors, as they attempt to acquire and deploy resources in ways that raise student performance?

II. Study methods. This report first presents a literature review addressing principals' resource use. It then compares California principals to those in other states, drawing on the national *Schools and Staffing Surveys* (1999-2000) collected by the National Center for Education Statistics (NCES). Finally, the report analyzes a new survey of a stratified random sample of elementary and high school principals in California (2005-06) aimed to answer the research questions stated above.

III. Summary of findings. Five sets of findings appear in the paper, corresponding to the research questions.

(1) *Characteristics of California principals*. California's principals display the same experience levels as do those in other states, but a substantial share in California and in other states have held their posts for less than four years. The state's principal workforce falls far short of matching the ethnic diversity of its students. They have similar salaries as do principals in other states, but lower salaries *relative* to the market value of workers. California principals working in schools with small proportions of students from poor families earn approximately $7,000 more than principals working in low-income communities, on average.

(2) *Educational goals and priorities*. Compared to principals in other states, California principals place stronger emphasis on basic literacy skills and multicultural content. The basic skills focus is further emphasized by the subset of California principals serving students from low-income families. Few California principals listed test preparation as a high priority, but most said that their district superintendent placed high priority on this goal.

(3) *What resources are acquired.* With the exceptions of Title I and SIP, categorical aid does not appear to provide principals with significant levels of fungible dollars. Often categorical funds are managed and deployed by district staff. According to principals' responses, the median elementary school raised $11,000 through PTA activities, from individual parents, or through other private sources; the median high school raised about $25,000 annually. These revenue flows vary across communities: schools serving higher concentrations of students from low-income families (median split) raise

about $21 per pupil from these private sources, while schools serving middle-class and affluent students raise almost three times more per pupil ($56 annually). While these differences are stark the total funds raised through donations are small in most districts. In contrast, almost nine in ten California principals say they use volunteers "sometimes" or "a great deal" to help staff classrooms or to provide tutorial services and there is substantially greater reliance on volunteers in schools serving fewer children in poverty.

(4) *How resources are allocated.* Principals allocate their own time to a variety of tasks. They report spending substantial time interacting with parents and handling teachers' concerns. Interacting with the district office, handling student discipline issues, and working on compliance requirements are the next most often cited uses of their time. Principals spend relatively less time evaluating or coaching teachers, helping teachers align their pedagogy and reviewing student work or classroom performance. When compared with principals in other states, California principals report spending less time on a variety of activities connected with instruction.

Four in five principals report shifting instructional time over the past two years to increase attention to reading and language arts. About two-fifths of elementary, and three-fifths of high school, principals increased the amount of time spent on test preparation. Two-thirds of principals report increasing the total length of instructional time through after-school or Saturday-school options. These changes were made more frequently by principals serving higher shares of students from low-income families.

The allocation of teachers is an important facet of resource deployment. A significant share of principals felt constrained by personnel rules, seniority, and other labor contract provisions as they allocated teachers to grade levels, courses, or differing students. Others, however, emphasized strategic concerns: creating assignments that freed time for planning and collaboration, or assigning stronger teachers to weaker students. High school principals and those serving low-income communities placed less emphasis on procedural rules in allocating teachers; elementary and female principals, and those in better-off communities, reported greater allegiance to rules and contract provisions.

Many California principals view student achievement data as a useful resource, but only about one-third work with this information at least once a month. They rarely use achievement data to assess the strengths or weaknesses of a teacher. Few principals used incentives to foster desired behaviors. For example: only a small share of California principals reward strong teachers with more desirable teaching assignments or other individual benefits.

(5) *Barriers to effective resource use.* Overall, principals valued more flexibility in dismissing ineffective teachers more than acquiring new teaching posts or other resources. They felt unconstrained, in general, in dismissing new teachers during their probationary period, but felt unable to fire teachers once they had won tenure. While they emphasized the importance for student outcome gains of greater flexibility to dismiss teachers, principals reported a desire to dismiss only one or two teachers among their current staff.

Principals also feel heavily constrained by restrictions embedded in labor contracts and categorical funding prescriptions. In contrast, principals report significant support from their district offices and school site councils.

IV. Authors' conclusions. To a limited extent, California principals recognize and respond to the priorities and organizational tools associated with standards-based reform. They report that they value basic skill development over other goals and they have shifted instructional time to focus on reading and language arts. Many have increased total instructional time. Categorical aid offers resources with which some principals have been able to respond to new incentives, but they view accompanying regulatory and paperwork requirements as burdensome and detrimental to student outcomes. In addition, principals see themselves as bound by the inability to fire ineffective teachers. They do not want to dismiss a lot of teachers; 75 percent wanted to dismiss two or fewer. However, the ability alone may increase their influence in their school and their ability to implement effective reforms. Thus, while some changes are evident, only a sub-set of principals appear to be making the most of the resources that are available to them. For example, few are strategic in their use teachers' time and student achievement data. With more flexibility and appropriate incentives this may change, but it appears to be the case to date.

I. Introduction and Background

<u>Overview</u>

Policy makers at the federal, state and local level may choose to decentralize decision making, relying on principals to allocate resources effectively. Conversely, they may choose to limit school level decision making by prescribing such things as budget allocation, instructional technology, and time structure. Information regarding principal behavior under varying levels of autonomy could help guide policy makers in their decisions to shift authority towards or away from principals. However, we know little about how principals conceive of resources, how they adjust their allocation of resources to respond to incentives, or the extent to which they either are or see themselves as hemmed-in by rules and state mandates. For all the contemporary policy talk of pushing principals to "manage for results," we know little about the conditions that would allow them to do so. This paper – drawing from surveys of California principals – aims to advance our understanding of principals' use of resources.

Principals often are seen as the linchpin to grassroots school reform, doing the steady work of leading instruction and motivating teachers and students. Critics of current school governance structures argue that principals are too constrained by regulations and education interest groups to act effectively (Chubb & Moe, 1990). These analysts often place principals at center stage in their push for charter schools, school-based management, or sending dollars directly to principals based on a weighted student formula (Bryk, Sebring, Kerbow, & Rollow, 1999; Ouchi, 2003). Other analysts argue that the current system already affords principals the flexibility to manage for results – some principals, in their view, simply fail to use that flexibility (Hess, 2005). In this view, it is not institutional flexibility that's the problem; but instead, principals' misplaced goals and capacities that constrain them. Despite reformers drastically varying prescriptions, the principal's office consistently plays a central role.

Although we lack a clear empirical picture of what principals do or why, we do know that their job is difficult. During a recent five-year period in New York City, more than half vacated their posts, a share that can't be explained only by historical retirement rates (Gootman, 2004). The Los Angeles Unified School District recently had to call back retired principals to fill vacant positions (Sahagun, 2000). The analysis below, from our 2006 California survey, shows that about one-third of California principals have held their current post for less than five years.[1]

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[1] During the 1990s, Steinberg (2000) found that about one-quarter of New York City principals stepped down within some two-year periods.

Countless tracts have been published on what school principals *should* be doing. These tracts include various normative portrayals of the role principals should play. This paper, however, begins to fill the empirical gap as to what principals *actually do* inside their schools when it comes to managing resources. We define resources broadly to include material inputs (e.g., textbooks, dollars and categorical aid), human resources (teacher acquisition, development and deployment), and the organization of these resources (e.g., increasing instructional time). Deployment necessarily involves some way of organizing resources through rules, incentives, or social norms and expectations of teaching staff. We include principals' training and capability to deploy resources as an additional capacity and, therefore, an additional resource at their disposal. Much of this analysis attempts to distinguish between the resources that principals in California perceive to be inadequate versus resources that they believe can not be deployed effectively, given institutional constraints. Because our analysis uses self-reported data from principals, we discuss the barriers principals *perceive*, but are unable to parse out any distinction between the perception and reality of these barriers. This perception of barriers alone is significant, as principals act on the information they have, faulty or not. Further research examining the actual, as compared to perceived, constraints principals face would provide further useful information for policy makers.

This paper begins by reviewing how the principal's role has been defined over time and how this managerial role is changing in light of demographic and policy shifts. It clarifies how the extant literature identifies factors that shape principals' behavior and beliefs concerning school-level resources. These factors include the principal's individual attributes and educational goals, the range of resources made available to principals from the state and district offices, and the degree of influence enjoyed by principals to allocate resources in their preferred ways. Sections II draws on an existing national data set to compare California's principals to those working in other states. Section III then examines results from a new statewide survey of principals that we conducted in 2006, focusing on our core interest of resource acquisition, deployment, and management constraints. The final section highlights findings and discusses their implications for policy.

Themes and Conceptual Framework

Inherent in models of school reform are assumptions about the role of principals. Policies such as weighted student formulas for schools and school-level accountability tend to decentralize decision making to the school and to the principal. Proponents of these reform models assume that principals have both the flexibility and the capacity to act strategically. Other policy options, such as

district-led school reform, rely less on principals, constraining their choices over resource allocation and directing them to particular instructional models.

Our analyses attempt to assess the extent to which principals currently have the flexibility and strategic outlook to carry out decentralized policies. These policies may have the potential to benefit students as they draw on the skills and knowledge of local actors to make to decisions, but they may fail if principals do not act strategically, either because of direct constraints on them or due to a lack of knowledge and capacity.
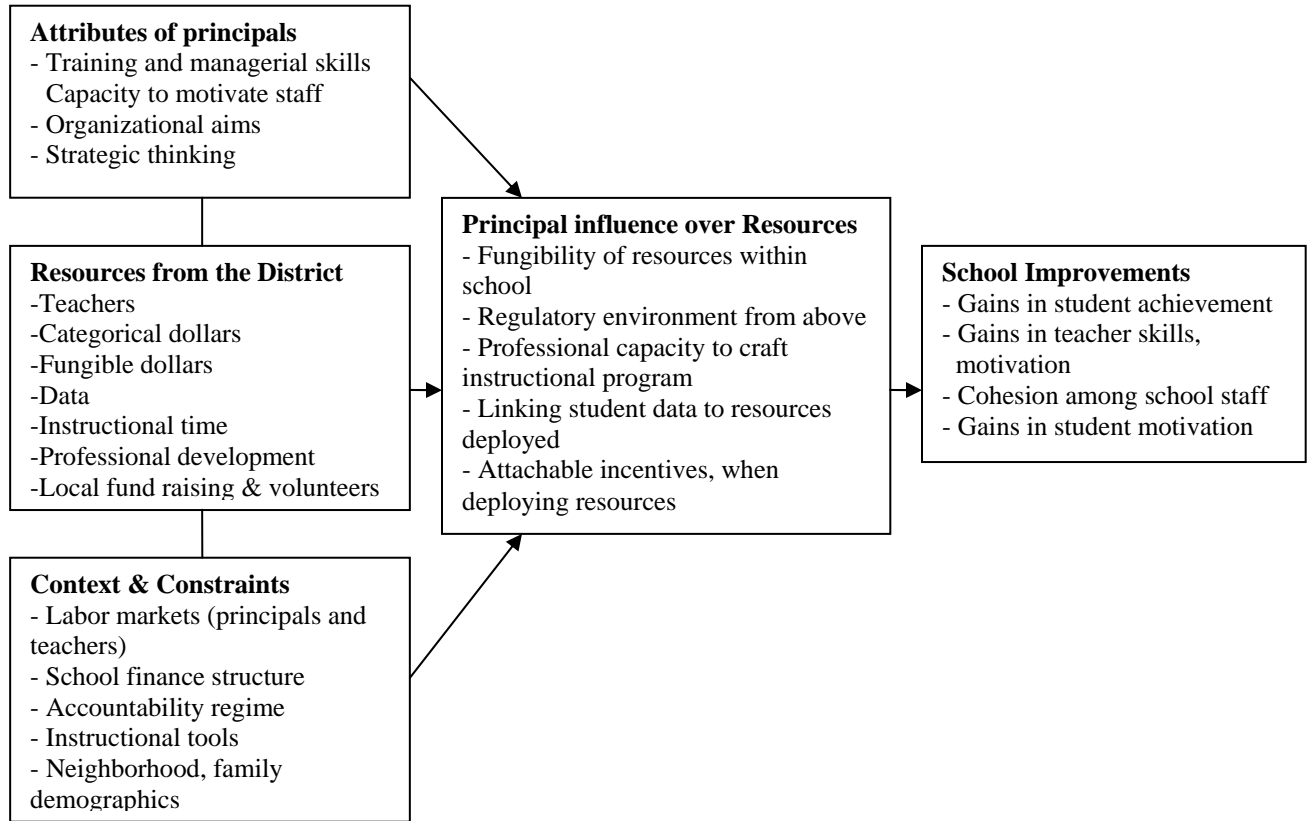
Our conceptual framework pictured in Figure 1 guides our analysis. New principals arrive in their posts with varying personal attributes and skills. Districts move an equally variable mix of resources down to principals, along with the rules and constraints in which they are encased. Finally, each school's surrounding community determines the characteristics of children that enter the schools, the teachers already employed and the pool of potential new teachers, the beliefs about children's potentials, and a history of the instructional tools and policies. These factors together determine principals' influence over resources, which in turn affects student outcomes.

This causal sequence includes several links for which empirical evidence is quite thin. To what extent do principals have the skills to be strategic and how can those skills be developed? Do principals' organizational aims match those of the broader society and how do standards and accountability policies help align these goals? What constrains principals in their efforts to improve student outcomes - is it a lack of resources, a lack of information about effective approaches, or a lack of flexibility to effectively use resources? Which constraints are felt most keenly? This paper works to illuminate some of these moving parts by focusing on the following five questions:

A) What are the *background* characteristics of principals, and do these attributes differ across differing kinds of schools or locations?

(B) What educational *goals and priorities* do principals pursue?

(C) What types of resources do principals *acquire* from their local district or private sources?

(D) How do principals *deploy* resources within their school?

(E) What *supports or constrains* do they feel from their district or other actors in the deployment of those resources?

We do not do a causal analysis nor do we look directly at the link to student outcomes; instead, we simply describe the landscape.

Figure 1: General model of how principals acquire and deploy resources strategically

Attributes of principals
- Training and managerial skills
  Capacity to motivate staff
- Organizational aims
- Strategic thinking

Resources from the District
- Teachers
- Categorical dollars
- Fungible dollars
- Data
- Instructional time
- Professional development
- Local fund raising & volunteers

Context & Constraints
- Labor markets (principals and teachers)
- School finance structure
- Accountability regime
- Instructional tools
- Neighborhood, family demographics

Principal influence over Resources
- Fungibility of resources within school
- Regulatory environment from above
- Professional capacity to craft instructional program
- Linking student data to resources deployed
- Attachable incentives, when deploying resources

School Improvements
- Gains in student achievement
- Gains in teacher skills, motivation
- Cohesion among school staff
- Gains in student motivation

Throughout the paper, we highlight two themes that consistently emerge from the analysis. First, principals desire greater flexibility to manage the resources within their schools; when given a choice between more resources or more flexibility over the resources they already have, principals tend to choose flexibility. They particularly value greater flexibility from the constraints placed on them from the state, such as those accompanying categorical grants, and they value greater flexibility to dismiss ineffective teachers. Second, principals vary in the extent to which they are strategic in how they think about and deploy resources. The literature suggests that resources most benefit a school when implemented in a cohesive and coherent fashion; and, conversely, that resources deployed in a scattered fashion are likely to produce anemic results. Strategic principals appear to be relatively evenly dispersed across the state. We find only small relationships between measurable characteristics of schools – such as student demographics, school size or district size – and the strategic disposition of principals.

Literature Review – Evidence on What Principal Actions Work

As enrollments grew in New England during the late eighteenth century, schools sorted students into age-based grade levels for the first time. Management and staffing responsibilities grew with increased staff and student size. The term *principal* was first noted in the minutes of an 1867 Albany board meeting, when some educators won additional income for "making fires in their respective schools during the cold season" (Weiss, 1992:36). Principals received no formal training. They were simply teachers released from classroom hours to manage their burgeoning schools.

The role of the principal continued to evolve, often taking center stage in reform proposals. Embedded in theories of school reform are diagnoses of a problem with the current principal role. These diagnoses often center on the failure of school leaders to assemble a high-quality teaching staff, to improve daily working conditions, or to motivate pedagogical improvements and, thus, to improve student outcomes. The principal is seen as the pivotal actor in acquiring and mobilizing human resources and instructional tools inside the school.

The principal's optimal role and actions inside the school have been painted in varying ways. Early in the twentieth century these normative philosophies cast the principal as the implementer of "scientific management" techniques. During the 1960s and 1970s they were seen as coordinators of ambitious categorical aid programs created by state and federal governments. From the 1980s forward principals were viewed as leaders of teaching improvements and as inspirers of warm, supportive "professional learning communities" inside their schools (Cubberly, 1923; Goodlad, 1984; Barth, 1990; Beck & Murphy, 1993).

The field of *educational leadership* has grown over the past twenty years, lagging just behind the rise of management gurus in the private sector. This literature is largely normative and not empirically grounded. That is, analysts put forward a causal theory of how certain actions or beliefs *ought to yield* desired outcomes inside schools, but the empirical basis of these causal claims remains weak. Among the portrayals of principals' optimal roles, allegedly leading to positive outcomes for teachers and students, are:[2] (1) principals should develop trustworthy and charismatic personality traits that motivate others; (2) principals should acquire analytic and managerial skills, attend to achievement data, peg actions to clear aims, and act decisively; (3) principals should create a shared professional community among teachers, which requires skills in moral suasion and in mobilizing unifying commitments and symbols inside the school; and (4) principals should be able to attract

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[2] These normative models of beneficial practices of principals come from Goodlad, Soder, & Sirotnik, 1990; Bolman & Deal, 1991; Sergiovanni & Starratt, 1993; Carlson, 1996; Shum & Cheng, 1997; McLaughlin & Talbert, 2001; Hess, 2006.

strong new teachers, shrewdly negotiate with the district for sufficient resources, and mobilize parents and other community benefactors.

Although the literature encourages principals to reflect on useful attributes and tools for school leadership, it displays several weaknesses. First, only occasionally do these normative theories specify (or empirically test) best practices for principals' acquisition and deployment of resources. Second, the empirical research that does exist is not always sound. Researchers often examine schools that manifest high achievement levels – including schools with unexpectedly strong performance given student or community attributes – and then try to associate principals' attributes or actions to desired outcomes inside their schools. These targeted studies rarely provide evidence of causality. For instance, a school's earlier history of high expectations for achievement, strong discipline practices, or evolving family demographics may bolster its ability to attract principals that possess similar attributes. Without observing the full flow of causality, research may wrongly infer that the principal caused the positive school practices.

The field of *educational leadership* also often ignores changing policy and demographic conditions that surround local schools. Principals may need to deploy a new set of managerial tools in response to changing curricular standards and accountability measures. Or, as a school's surrounding neighborhood changes and the teaching staff turns over – characteristic of many so-called inner-ring suburbs in California – the principal's actions may have to adapt to new environmental conditions.

A small empirically grounded literature has emerged that associates the actions of principals with stronger student performance or with intermediate outcomes, such as stronger teaching practices, potentially predictive of higher achievement. At times, gains in achievement are observed after intervening into the actions of principals or enriching the resources made available. A portion of this literature focuses on the principal's role in effectively implementing state or district innovations. This empirically grounded genre of work focuses on three overlapping and interrelated school management practices central to leading strategically: first it looks broadly at institutional contexts, such as the level of decision-making, to ask whether these factors affect whether additional resources are implemented effectively to improve student outcomes; second, it identifies the link between instructional and organizational coherence of resource use and student outcomes; and, third, it addresses how principals can build human resources within schools by nurturing professional communities. We address each in turn below.

Effective Implementation of Additional Resources: The current literature suggests that a simple infusion of additional resources will not bolster results. For example, the initial evaluation of California's Immediate Intervention – Underperforming Schools Program (II/USP) yielded sobering results (O'Day & Bitter, 2003). School councils and principals tended to put the II/USP funds towards a haphazard array of inputs and teacher activities, driven by within-school demands, adding little to the mix of teacher skills or instructional cohesion.

Similarly, changing the governance structure so that there is more control over resources at the school level has led to mixed results. Some principals make good use of this resource flexibility to create coherent instructional reforms, while others do not. The idea of moving core budgets down to schools after weighting students according to their attributes or instructional needs has received significant attention in recent years. This student-based budget is what Ouchi (2003) and others have referred to as a "weighted-student formula." Cincinnati, Houston, San Francisco, and Seattle have tried differing renditions. Oklahoma's entire state finance system is based on a simple allocation formula that weights certain categories of students (Fuller, Bridges, & Pai, in press). Evidence from case studies suggests that a larger share of a principal's budget becomes flexible under a weighted-student formula plan, allowing school managers to deploy inputs to elements of the instructional program according to the individual school's needs (Miles, Ware, & Rosa, 2003).

Decentralization effects on resource allocation: A recent survey in Washington State shows that principals are eager to achieve greater flexibility, in particular to become less hamstrung by state regulation and the monitoring of categorical aid programs. It found that 91 percent of principals agreed that decentralization would help to improve their performance (Portin & Shen, 2005). A study by Jon Sonstelie (2006) conducted in concurrence with this report indicates that California principals, if given additional resources and complete control over their budgets, would, on average increase instructional time through programs such as extended day and year, tutoring and summer school and increase instructional capacity through coaches, additional time for teachers to work together, and support staff. They would decrease class size but too a lesser extent than they would invest in the time and capacity.

A variety of experiments with school-based management (SBM) or budgeting continue to unfold in local districts – with rather inconclusive results. California funds both the School Improvement Program (SIP) and the High Priority Schools effort (HPS), each allocating discretionary funding to school councils which often are coordinated by the principal. Such attempts

at enriching levels of flexible resources can yield distinct structural reforms, such as new reading programs within high schools (Carnoy, Elmore, & Siskin, 2003).

Principals sometimes use the resources over which they do hold control to encourage cooperation or compliance from their staff. Ingersoll's (2003) work inside several schools turned up a rich array of such incentives: allocation of space and preferred classrooms; more manageable teaching schedules and choice classes or grade levels; assignment of playground or non-teaching duties; budget for field trips, lab equipment and projects; and travel funds to conferences. Cann (2006) found that some department chairs in urban high schools reward certain teachers by allocating them to preferred, higher-level math courses. But additionally, teachers with longer running friendships or seniority also were allocated classes populated by high achieving students, not necessarily those teachers who displayed strong pedagogical effectiveness. Incentives may be allocated in ways that advance morale or loyalty but hold little effect on student achievement, perhaps reflecting the lack of training that aspiring principals have received in management or the lack of incentives principals can allocate within institutional constraints (Hess, 2006).

Decentralization effects on student outcomes: In Chicago, under democratic controls advanced in the early 1990s about one-third of principals were able to inventively deploy resources in ways that appeared to boost achievement (Bryk et al., 1999). Unfortunately, the results were quite uneven across schools. Many principals focused either on reducing class sizes and buying additional resource teachers or more peripheral inputs, such as social welfare supports (Hess, 1999). It remains unclear whether the new, localized lines of accountability, specific inputs, or a mix of the two explained the gains in student motivation or achievement observed in a subset of Chicago schools. In any event, this line of inquiry shows that when an administrator has full discretion, resources are "used in so many ways with such varied effects that it is difficult to predict the outcomes of investing in them," according to Raudenbush (2005).

Murnane & Levy (1996) detail how two elementary school principals in Texas targeted new dollars from statewide finance reform towards lowering class size, building a coherent instructional program, getting children to school more consistently and increasing parental involvement. These two schools, alone among the 15 Austin schools benefiting from fresh infusions of cash targeted towards impoverished communities, demonstrated remarkable gains in test scores. Murnane & Levy conclude that principals who carefully and steadily deploy resources to interrelated organizational changes can bring about gains in achievement.

These studies show that while resources can be used effectively at the school level, this is not always the case. When local actors are given flexibility on the use of new resources, sometimes they use them well, and sometimes they do not. Similarly, even when the use of resources is specified from the state or district, the implementation of this resource allocation can vary in effect. Resource regulation from the state neither removes the importance of local capacity nor insures effective resource use.

The popular input-focused strategy of expanding instructional time offers a relevant lesson. While this push for more time may come from state policy or local district edicts, the principal is again at center stage, charged with assembling the teachers, instructional program, and other ingredients that make for effective use of new time. The evidence suggests that more time alone, without a rich mix of supporting inputs, will not raise student achievement (Fuller & Clarke, 1994). Massachusetts is currently experimenting with longer school days in low-performing elementary school, lengthening hours spent on core academic topics and offering short-period electives mid-day to better engage students. The state is also expanding preschool and after-school enrichment activities (Maxwell, 2006). Some charter schools, including the KIPP academies, bank heavily on longer school days and Saturday activities, but the effectiveness of this expanded classroom schedule remains inconsistent (David et al., 2006).

Class size reduction is another example. While the state or district may decide on the policy, often the principal is left to choose teachers to meet the resource needs of the school. The effectiveness of this policy will depend on the labor market for teachers in the area, the effectiveness of recruiting, the constraints principals face in who they are allowed to hire from the pool of interested candidates, and the effectiveness with which they choose the best candidates for their schools.

The issue of effective implementation of new resources should not be read as a call for more state control over new resources allocated to the school. It is not clear that more state control leads to more cohesive resource use. As the examples above illustrate, even with state regulation determining that resources go to expanded instructional time, principals are still left with some resource allocation decisions. Principals vary in how well they make these decisions. Better understanding why principals' resource allocation decisions vary may help in the development of more effective policy approaches.

Building instructional and organizational coherence: The research literature is not rich enough to provide solid information on which individual resources or packages of resources are

most helpful for increasing student outcomes. Though, there is a loose tie between student outcomes and some resources, such as small class sizes and particular professional development programs, there is not a rich enough understanding of resources to know in which context these are helpful nor whether they constitute an optimal use of resources. The evidence does clearly show that some schools are more effective than others; though we know less about why that is and how this effectiveness is tied to resource use. This section describes how the allocation of resources appears to be linked with improved outcomes for students. Unfortunately, it is based on research that generally does not meet stringent standards for identifying causation. It could be, for example, that higher achieving workplaces are more able to allocate resources in the ways that we see in effective schools, not that the resource allocation itself causes the higher achievement. Nonetheless, these studies constitute the best available evidence.

Raudenbush (2005) suggests a shift "in how we conceive the study of resources" which focuses on the organization of "instructional regimes" inside schools. Such regimes may involve a curricular package or aligned instructional program to unify teachers and their pedagogies. But effective regimes go beyond a new curricular package to involve assessing student progress, attending to resulting data on children's strengths and weaknesses and interacting with them effectively to address shortcomings (Cohen, Raudenbush, & Ball, 2003). These researchers urge principals (and fellow scholars) to pinpoint the constraints on resource flows that hamper a coherent, socially interactive regimen. These barriers could include inadequate time to discuss student data or lack of professional development to master new curricular content or experiment with alternative pedagogical approaches (Borko, 2004).

Resources for Results: A 2006 study by EdSource, *Similar Students, Different Results* (SSDR), aimed to identify management practices that might explain variation in test scores among schools serving similar students coming from similar social-class backgrounds, focusing primarily on how principals viewed and mobilized the tools of standards-based accountability. The team drew a sample of schools that fell between the 25th and 35th percentile on the California Department of Education's Schools Characteristics Index (SCI).[3] The study found that these schools' scores on California's academic performance index (API) ranged widely, from 534 to 782. Within this sample, the study found the following practices associated with higher API scores:

- Principals' focus on student achievement and instructional reforms

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[3] The SCI combines several variables related to social-class and linguistic attributes of children and families, including English learner status, ethnicity, parent education level, participation in subsidized lunch program, and length of students' attendance at their present school.

- Teachers' feeling of shared responsibility for raising student performance combined with a shared expectation that this could be done

- Steady data use by district staff and principals

- Principals' utilization of student data from more than one source

- Principals' application of data "to evaluate teachers' practices and to identify teachers who need instructional improvement" (EdSource, 2006:9)

- Fewer constraints on hiring quality teachers[4]

- Success in lengthening the school year

- More ample professional development opportunities

In addition to identifying these practices, the study found that principals tend to focus on two sets of resources associated with instructional improvement. First, almost all principals reported that state *curricular standards* provided a clear framework for articulating unambiguous learning aims in the elementary grades. Second, principals emphasized the importance of acquiring *instructional materials* necessary for implementing the standards, although they varied in their efficacy in obtaining these materials from their district office. Principals also varied in their propensity (or capacity) to translate curricular standards into specific pedagogical practices, and then to assess student performance (Williams & Kirst, 2005). While none of these factors alone explained sizeable proportions of the variance in schools' API scores, the initial SSDR report concluded that the careful, steady and creative application of a combination of discrete resources – such as curricular standards, instructional materials, time and professional development – may contribute to the creation of "a shared culture that makes student achievement a top priority," (*EdSource*, 2006:16) which was associated with higher API scores.

The SSDR study showed how principal's capacity to combine inputs can result in a better-supported teaching staff and higher student performance. As described in Figure 1, this leadership capacity may relate first to the principal's individual attributes, skills and general leadership capacity, and second to local institutional conditions that yield varying levels of resources and institutional flexibility. For example, principals vary in their ability to discern strong teacher candidates and hire the best ones. We know that teacher quality makes a difference in student achievement (e.g., Rivkin, Hanushek, & Kain, 2005); we know less about how principals acquire strong teachers within the organizational constraints imposed by district offices or labor contracts or how differing teacher characteristics, skills or knowledge interact with other resources within the principals' control.

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[4] Simple count of barriers that impede the principal's ability to hire strong teachers, listed in Appendix 1.

A related line of inquiry to the SSDR study focuses on how principals might better "manage for results" (Hess & Kelly, 2005). The era of top-down accountability has advanced a recast set of tools that are linked to standards-based reform: clearer learning goals, tightly coupled curricular packages, and standardized tests aligned to standards and daily teaching practices. But does the daily context in which principals work allow for the rational application of these new tools? One early study found that principals typically spend less than a fifth of their workday on instructional issues (Martin & Willower, 1981). As we saw in the *EdSource SSDR* study, student performance was significantly higher in school where principals readily exercise core tools of accountability, teachers share high achievement expectations, and staff spend a larger proportion of time analyzing student data. Unfortunately, whether higher student achievement precedes or follows this pattern of "managing for results" remains unclear.[5] In addition, while some principals now report receiving more data on student performance, many report infrequent discussions with their teachers on where students or skill areas are falling short (Woody, 2004).

What conditions support instructional and organizational coherence? Under some local conditions, spending on "whole school reforms" may advance instructional cohesion and a more strategic deployment of resources by the principal. O'Day and Bitter (2003) found stronger achievement gains when California principals or school councils focused discretionary state dollars on efforts that more carefully aligned curricular standards and pedagogical practices across teachers.[6] Similarly, one study found less instructional cohesion and participation, as reported by teachers, when principals spent more time monitoring a greater number of fragmented categorical aid programs (most often situated in urban schools), as compared with principals who had to juggle fewer categorical funding streams (Fuller & Izu, 1986).

Principals who hold both the flexibility and the capacity to think strategically – in acquiring fungible resources and deploying them in motivating ways – report worrying less about daily logistics and more about instructional leadership (Bossert et al., 1982; Leithwood & Montgomery, 1982; Fullan, 2001). However, many principals feel hemmed-in by the demographic and economic conditions that surround their schools, leading to issues of safety, basic order, and discipline; and remarkably, few pre-service training programs for principals emphasize methods related to "managing for results," such as how to focus resources on instruction, use student data to adjust

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[5] Note that throughout this paper when we say, *significantly different*, a statistical test has been performed to ascertain that mean differences or regression coefficients were significant at *p*<.05 or smaller.
[6] These findings stemmed from the evaluation of the Immediate Intervention / Underperforming Schools Program, mounted by Sacramento (O'Day & Bitter, 2003). This program has since been renamed the High Priority Schools initiative.

teachers' attention, or mobilize other tools that may accompany local accountability programs (Hess, 2006).

Researchers have found that higher-stakes accountability policies can aid principals in making curricular coverage more consistent across classrooms (Koretz et al., 1996a) and in linking teacher development activities to curricular standards (Borko, Elliott, & Uchiyama, 1999). The majority of teachers in two large districts studied by Shepard and Dougherty (1991) reported that test data aided their efforts to acquire more time and resources from principals to aid low-performing students. But the consequences of increased accountability are not uniformly positive. Hamilton, Stecher and Klein's (2002) review found considerable evidence that as state testing dates approach, teachers move away from more complex forms of knowledge and pedagogy and simply cover elements that appear on the standardized test. Koretz (1996b) found that one-third of Maryland principals reallocate teachers across grade levels to bring up test scores, regardless of the overall effect on student performance. Many Washington state principals offer rewards to students who perform at higher levels, including more field trips and classroom parties (Stecher, et.al. 2000).

In summary, the research suggests that shaping the allocation of resources around stated instructional goals is central in order to link resources to student outcomes. It is possible that an institutional framework of greater accountability tied to new technologies that supply substantially more information to schools and districts both about the performance of their students and about program options will facilitate this cohesive use of resources as local administrators focus more narrowly on improving student achievement. However, evidence to date suggests that such coherence is not wide-spread, perhaps due to institutional constraints, but also due to lack of capacity at the local level.

Nurturing professional communities inside schools: The third area of research on principals' roles in resource allocation harks back to early research on "school climate," the creation of orderly and supportive environments (e.g., Edmonds, 1979; Rutter et al., 1979). This approach recognizes that human resource capacity of a school is a combination of the skills that the individuals bring with them to the school and how the skills are combined and utilized for common goals.

Scholars have recently emphasized how principals variably construct a shared mission for their school, including a common understanding across their teachers regarding the tools of accountability and complementary resources (Coburn, 2001; Spillane, 2004). Without collectively held goals or shared school culture to link accountability to student learning, the new procedures

may seem mechanical, whereby each teacher works alone inside their classroom with little collegial support or broader sense of purpose. This perspective has received empirical support: when principals have advanced stronger instructional cohesion and demanding course patterns, backed by cooperative action by teachers, the motivation of teachers and performance of students can increase (Lee & Bryk, 1988; Lee, Dedrick, & Smith, 1991). Some researchers have turned to private or small schools to learn how principals can create this stronger cohesion and mutual obligation among teachers and with students (Bryk, Lee, & Holland, 1993; Fuller, 2000). Teachers in these schools, on average, report higher levels of "cooperative efforts" among staff, compared to those in regular public schools (NCES, 2003).

Some analysts of school organizations have focused on how resourceful principals try to nurture professional communities inside schools. These scholars examine the basic tension between *commitment* and *control*, as Rowan (1990) puts it.[7] The teacher's everyday working conditions provide one starting point for this line of research, including how principals deploy resources to variably enrich material and social rewards found in the work place (Little & McLaughlin, 1993).

Much of the work on school communities illuminates how principals can deploy monetary and human resources to strength teachers' collective resolve, focusing on high expectations for, and the intrinsic rewards associated with, student achievement. Principals and teacher leaders can encourage innovation beyond institutionalized pedagogical practices, at times by implementing incentives (McLaughlin & Talbert, 2001). Principals can also advance richer "learning communities" by carefully selecting new teachers who fit well with their school's students and organizational culture; by establishing some autonomy from the district rather than mechanically carrying out the rules; by attending to the quality of the teachers' everyday workplace; and by strengthening social relationships among adults and with students. Some empirical studies have associated these elements of principal management – each requiring monetary or human resources – with higher levels of teacher motivation or student achievement (Rowan, Raudenbush, & Cheong, 1992; Bryk et al., 1993). The question remains: what resources and social action by principals help to sustain these beneficial social relations and pro-learning norms inside a school?

Summary: In summary, this literature review points to the importance of principals in the effective utilization of resources within schools. Even within a system of state constraints, the principal's role is central. In policy regimes that decentralize decision making, the principal's role

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[7] Ingersoll (2003) details how many teachers experience the tensions around "consent" versus "control," whereby rules come down from policy makers or district officials prescribing what and even how to teach. This serves to advance uniformity in the implemented curriculum while diminishing teachers' feelings of consent and the intrinsic rewards gained from their everyday work.

becomes even more vital. However, principals vary in how well they utilize resources. While there is no clear formula for effective resource use, the evidence suggests that cohesive strategies that focus on student outcomes and motivate teachers are central to success. To facilitate enhanced student outcomes due to the effective use of resources, it is useful to understand why variation between principals exists. Do principals lack the disposition or information to act in such a cohesive manner or do constraints keep skilled, knowledgeable and well meaning principals for acting in such a way?

II. Comparing Principal Profiles – California and Nationwide

The next two sections report on findings from two surveys of school principals. Each investigation uses the resulting data to look at resource acquisition and deployment, focusing on the extent to which principals are strategic and the constraints they face. This section draws on the federal *Schools and Staffing Surveys* (SASS), a rich database derived from surveys of principals and teachers nationwide. This information allows us to compare California principals with their counterparts in other states. Section III details results from our new 2006 survey of elementary and secondary school principals, sampled from a representative array of California communities. This survey focuses on the backgrounds, work lives, aims, and management approaches of principals. The analyses focus on our core questions related to principal resource use – acquisition, deployment, strategic thinking, and constraints:

A. What are the *background characteristics* of principals, and do these attributes differ across differing kinds of schools or locations?

B. What educational *goals and priorities* do principals pursue?

C. What types of resources do principals *acquire* from their local district or private sources?

D. How do principals *deploy* resources within their school?

E. What *supports or constrains* do they feel from their district or other actors in how they deploy resources

Background on the Schools and Staffing Surveys (SASS), 1999-2000

These surveys, conducted by the National Center for Education Statistics, include four questionnaires: one each at the district, school, principal, and teacher level. The SASS gather data on teacher supply and demand, teacher and administrator backgrounds and qualifications, and school

programs and conditions. Pertinent to our study, the SASS also question teachers and administrators on perceptions of school challenges and conditions.[8]

Our sample is restricted to public schools where responses from both the principal and school were available, given that the principal is our primary unit of interest and the school survey contained a good deal of information regarding each principal's working conditions. This restriction gave us a sample of 8,527 public school principals, 393 of whom worked in California. To gain an understanding of how California principals compared, not only to all principals outside of the state but in particular to states that are similarly large and with a large proportion of immigrant students, we broke out the principal numbers for Florida (*n*= 210), New York (*n*=267) and Texas (*n*= 413). This left us with a fifth comparison group composed of the 7,234 principals surveyed from the other 46 states.

Within California we aimed to identify differences among principals based on the socio-economic status and ethnic breakdown of students served. To this end we broke the 393 high schools into the top and bottom quartiles and middle 50th percentile by percent of students receiving free or reduced lunch and percent of student body that is African American or Latino. According to our sample, the top quartile of SES schools have a mean of nine percent of students qualifying for free or reduced-price lunches, as compared with the lowest SES schools, with a mean of 91 percent of students qualifying for lunch subsidies. The middle 50 percent of schools fell between 20 percent and 77 percent of students qualifying for lunch subsidies.

We also divide the California sample based on the percent of students that is African American and Latino. The middle 50 percent of schools by African American and Latino population ranges from 17 percent and 65 percent. The top quartile averages 85 percent black and Latino students; the lowest quartile averages 10 percent. To further examine intra-state differences, we highlight the most extreme cases by further dividing the schools into those that fell into both the wealthiest and whitest quartiles or the poorest and highest students-of-color quartiles. Once we broke the schools into such extreme categories, we greatly limited the sample size: only 46 and 40 schools fall into these categories, respectively. Notably, a high percentage of black and Latino students seems to overlap with a high percentage of students eligible for lunch subsidies, even more

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[8] To ensure that the samples contain sufficient numbers for estimates, SASS uses a stratified probability sample design. Public and private schools are over sampled into groups based on certain characteristics. After schools are stratified and sampled, teachers within the schools are also stratified and sampled based on their characteristics http://nces.ed.gov/ surveys/sass/ovrvchoosing.asp). The SASS dataset includes a series of 88 balanced replicate repetition weights which we used to estimate means and standard errors of the estimate for each calculation. The principal-level weights were used for all calculations, except those at the teacher level, for which the teacher level weights were used. Standard errors of the estimate, presented in parentheses below any estimate, were adjusted for the stratified nature of the sample.

closely than how a low share of students of color coincides with low percentage of kids eligible for lunch subsidies. The least privileged category (lowest SES or highest percent students of color) was used as a reference group for means tests on each variable.

Student and family demographics come with predictable economic and social problems that worry principals. An earlier study, also drawing on the SASS data, found that the top four problems reported by principals were detrimental family background (tied to poverty), lack of preparation for learning, low motivation, and disrespect for teachers. These labels indicate indices that were built by the research team, made up of inter-correlated survey questions (Vandergagt, Shen, & Hsieh, 2005). High school principals reported more intense concern with these issues – which focus more on surrounding conditions than problems rooted inside the school – than did elementary principals.

A. What are the background characteristics of principals and do these attributes differ across differing kinds of schools or locations?

Table 1 shows that California principals are more diverse ethnically than those working in other states. A larger share, for example, is of Asian or Latino descent in California and a higher share of California principals is female, compared with those in other states. The most notable number among the racial breakdown may actually be the percent of black principals working in California schools, given that the proportion of the state's population of African American descent has become quite small. According to the 2004 population census, the only two racial or ethnic groups that are over-represented in California's population of principals are blacks and non-Latino whites.[9]

The national context also is helpful in interpreting principals' salary levels within California. While California's principals earn a higher mean salary compared to principals in other states, this difference is due largely to costs. Table 1 shows higher salaries in California than in other states except for New York. However, Table 2 gives a ratio of mean principal to mean teacher salary by state; California's ratio is similar to that of other states. Additionally, if salaries are adjusted based on the mean salary for a college-educated worker in each state, California principals are under-compensated according to their relative market value in comparison to all state groups except Texas.

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[9] The percents of (1) blacks, (2) American Indian and Alaskan natives, (3) Asians, (4) Native Hawaiian and other Pacific Islanders, (5) persons reporting two or more races, (6) Hispanics, and (7) whites in California in 2004 were 6.8, 1.2, 12.1, 0.4, 2.4, 34.7, and 44.5. In the rest of the United States these were: 12.8, 1.0, 4.2, 0.2, 1.5, 14.1, and 67.4. Data appear on the Census Bureau website: (http://quickfacts.census.gov/qfd/states/06000.html). These numbers do not take into consideration the percentage of each group over the age of 21.

Table 1. Principals in California and the Rest of the Nation

Variable	CA	FL	NY	TX	Rest of US
Salary	$76,041.42	$65,627.77 ***	$81,792.98 ***	$60,907.99 ***	$65,067.59 ***
	(736.37)	(483.45)	(873.30)	(630.71)	(151.37)
	8.55	7.70	8.17	8.02	9.12
Years as Principal	(0.49)	(0.44)	(0.48)	(0.42)	(0.10)
	4.02	4.67	5.36 **	5.03 *	5.17 ***
Yrs Prin of this school	(0.30)	(0.29)	(0.39)	(0.30)	(0.07)
Years teaching before	12.63	13.15	15.10 ***	11.95	12.79
became principal	(0.52)	(0.46)	(0.52)	(0.42)	(0.09)
% with < 2 yrs	21.79%	18.24%	23.68%	20.31%	22.58%
experience	(0.02)	(0.03)	(0.03)	(0.03)	(0.00)
% BA	5.32%	0.28% **	0.00% **	1.88%	1.28% *
	(0.02)	(0.00)	-	(0.01)	(0.00)
% MA	66.31%	78.42% **	22.72% ***	69.97%	52.21% ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.01)
% Professional Degree	17.23%	13.72%	66.01% ***	18.10%	36.51% ***
	(0.03)	(0.02)	(0.03)	(0.03)	(0.01)
% PhD	11.14%	7.58%	11.27%	10.05%	9.99%
	(0.02)	(0.02)	(0.02)	(0.02)	(0.00)
Age	51.40	51.22	51.58	49.26 ***	50.15 **
	(0.41)	(0.36)	(0.41)	(0.42)	(0.09)
% Female	53.24%	57.93%	49.70%	42.81% **	41.45% ***
	(0.03)	(0.03)	(0.04)	(0.03)	(0.01)
% White	69.26%	72.70%	86.02% ***	73.70%	85.24% ***
	(0.03)	(0.03)	(0.02)	(0.03)	(0.00)
% Black	10.39%	15.83%	10.82%	10.18%	10.93%
	(0.02)	(0.03)	(0.02)	(0.02)	(0.00)
% Hispanic	16.56%	10.42% ~	2.65% ***	15.52%	2.42% ***
	(0.03)	(0.02)	(0.01)	(0.02)	(0.00)
% Asian	3.58%	0.99% ~	0.17% *	0.00% *	0.48% *
	(0.01)	(0.01)	(0.00)	-	(0.00)

Table 2. California SASS data inter-state salary, raw and adjusted

Variable	CA	FL	NY	TX	Rest of US
Principal's Salary	$76,041.42	$65,627.77 ***	$81,792.98 ***	$60,907.99 ***	$65,067.59 ***
	(736.37)	(483.45)	(873.30)	(630.71)	(151.37)
Teacher's Salary	$46,434.04	$37,085.59 ***	$50,953.82 ***	$37,748.35 ***	$38,252.16 ***
	(302.26)	(515.85)	(697.83)	(312.54)	(112.66)
Ratio Principal Salary/	1.637622313	1.769629929	1.605237448	1.613527214	1.701017407
Teacher Salary					
Principal Salary Adjusted	$76,041.42	$81,930.45 ***	$87,965.62 ***	$72,220.72 ***	$79,141.96 ***
to CA	(732.20)	(607.48)	(934.24)	(749.06)	(183.51)

California's principals appear to turn over more, moving among different schools, compared with principals in other states. Although California principals have similar years of experience as principals in the rest of the nation, they have worked at their current schools for shorter periods of time, on average. This turnover could be due to a number of factors: a more mobile population, greater disparity in pay between school districts or greater job dissatisfaction. We cannot sort out the causes in this analysis.

Table 3. California SASS data intra-state principal backgrounds

							Interactions	
Variable	Low SES	Mid SES	High SES	High Color	Mid Color	Low Color	Low SES/ High Color	High SES/ Low Color
Salary	$73,824.48	$75,622.88	$77,441.78	$76,713.50	$75,579.56	$74,562.03	$75,968.97	$76,897.55
	(1,254.18)	(1,201.68)	(1,357.28)	(1,230.69)	(1,097.29)	(1,531.88)	(1,857.21)	(2,359.51)
Years as Principal	8.50	9.04	8.34	9.62	7.65	10.07	8.91	9.51
	(1.04)	(0.81)	(1.20)	(1.06)	(0.67)	(1.15)	(1.53)	(2.07)
Yrs Prin of this school	4.55	4.40	3.30	4.23	3.78	4.90	3.87	3.85
	(0.74)	(0.42)	(0.62)	(0.42)	(0.37)	(0.90)	(0.52)	(1.18)
Years teaching before became principal	11.15	12.83	13.25	11.20	13.03	12.78	11.97	12.09
	(1.00)	(0.80)	(1.08)	(0.84)	(0.78)	(1.07)	(1.42)	(1.30)
% with < 2 yrs experience	19.29%	20.34%	16.84%	21.39%	21.20%	12.87%	19.26%	12.93%
	(0.05)	(0.04)	(0.06)	(0.05)	(0.04)	(0.04)	(0.06)	(0.08)
% Female	54.54%	48.30%	54.25%	62.67%	49.97%	42.45%	64.94%	51.26%
	(0.07)	(0.05)	(0.08)	(0.06)	(0.05)	(0.06)	(0.09)	(0.11)
% BA	5.13%	6.18%	4.34%	2.68%	6.72%	5.75%	3.52%	4.27%
	(0.04)	(0.03)	(0.03)	(0.02)	(0.03)	(0.04)	(0.04)	(0.05)
% MA	61.88%	65.44%	68.91%	69.67%	62.40%	67.22%	64.31%	66.97%
	(0.07)	(0.04)	(0.05)	(0.07)	(0.05)	(0.07)	(0.09)	(0.09)
% Professional Degree	26.23%	14.60%	17.35%	16.73%	20.77%	14.37%	21.44%	17.99%
	(0.06)	(0.03)	(0.04)	(0.05)	(0.05)	(0.05)	(0.08)	(0.07)
% PhD	6.76%	13.77%	9.40%	10.93%	10.12%	12.66%	10.74%	10.76%
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.05)	(0.05)	(0.05)
% White	57.27%	68.40%	85.03%	45.93%	74.70%	83.73%	48.51%	87.93%
	(0.08)	(0.05)	(0.06)	(0.08)	(0.04)	(0.08)	(0.10)	(0.09)
% Black	16.76%	8.25%	5.84%	22.90%	8.02%	0.00%	17.61%	0.00%
	(0.06)	(0.02)	(0.03)	(0.06)	(0.02)		(0.08)	
% Hispanic	22.68%	18.11%	7.77%	28.11%	11.54%	15.77%	28.70%	12.07%
	(0.07)	(0.04)	(0.05)	(0.06)	(0.03)	(0.08)	(0.08)	(0.09)
% Asian	3.30%	5.14%	0.57%	3.06%	5.37%	0.32%	5.18%	0.00%
	(0.03)	(0.02)	(0.01)	(0.03)	(0.03)	(0.00)	(0.05)	

Table 3 shows intra-state differences among principals' backgrounds. Principal characteristics do not seem to vary as we might expect. Rather, high and low SES schools and high and low color schools often look more like each other than like the middle fifty percent. Interestingly, the highest credentialed principals are not at schools with more privileged student bodies, but rather at middle or lower SES and schools with a high proportion of non-white students. However, these differences are not generally statistically significant.

The biggest intra-state difference is a racial or ethnic "preference for one's own." White principals staff just under half the schools that fall into the highest quartile by free lunch and students of color, but serve in nearly 90% of the wealthiest, whitest schools. Conversely, Latino

principals are nearly twice as likely to work at high-poverty, high-percent-non-white schools as at other schools. African Americans comprise almost a quarter of the principals at schools with the highest percentage non-white students, but not a single African American principal works in the lowest quartile.

The general lack of a relationship between principal characteristics and student demographics is noteworthy because, as we will see below, outside of California a stronger relationship between student demographics and principals' work is apparent.

B. What educational goals and priorities do principals pursue?

Effective use of resources depends on what it means to be effective. Resource use may be effective towards reaching one set of goals but ineffective toward reaching others. Because of this, understanding what goals principals have and to what extent their goals align with state goals is a step in understanding whether principals are likely to use resources effectively if given the flexibility to allocate resources more freely.

The SASS gave principals a list of eight possible teaching and learning priorities and asked them to rank their first three priorities. Tables 4 and 5 show the percentage of principals who included each priority in their top three, regardless of its rank order. California principals report being more concerned with basic literacy skills and multi-cultural awareness than their peers in other states, who are more likely to emphasize good work habits and personal growth. The fact that multi-cultural awareness shows such a consistent difference is notable, as we will see later that within California this priority is disproportionately a concern of wealthier, whiter schools.

The instructional priority that covaries most with student composition is principals' interest in "building basic literacy skills" – which, again, is a stronger priority among California principals than those in other states. Wealthier and whiter schools prioritize basic literacy at a rate similar to non-California schools. Schools with fewer students in poverty (although not whiter schools) also are more likely to prioritize academic excellence. Notably, intra-state differences in principals' priorities tend to be between high income schools and non-high income schools; middle-class schools tend to look more like low income schools than high income schools. An earlier analysis of SASS data, 1990 through 1999, found that elementary school principals have become increasingly focused on basic skills; high school principals, instead, increasingly ranked "mastery" or "academic excellence" at their top priority over the decade (Shen, Palmer, & Crawford, 2005).

Table 4. SASS data inter-state principal priorities

	CA	FL	NY		TX		Rest of US	
Building Basic Literacy Skills	90.81%	87.07%	77.17%	***	80.54%	***	78.77%	***
	(0.02)	(0.02)	(0.03)		(0.02)		(0.01)	
Academic Excellence	69.92%	71.50%	68.84%		72.46%		69.05%	
	(0.03)	(0.03)	(0.03)		(0.03)		(0.01)	
Occupational/ Vocational Skills	10.58%	16.22%	*	8.40%	10.92%		13.57%	*
	(0.01)	(0.02)	(0.02)		(0.02)		(0.00)	
Good Work Habits/ Self Discipline	46.25%	54.09%	~	65.74%	***	62.01%	***	61.34%	***
	(0.03)	(0.03)	(0.03)		(0.03)		(0.01)	
Personal Growth	24.53%	28.36%	27.73%		31.51%	~	33.80%	***
	(0.02)	(0.04)	(0.03)		(0.03)		(0.01)	
Human Relations Skills	27.58%	21.83%	28.11%		19.33%	*	25.34%	
	(0.02)	(0.02)	(0.03)		(0.02)		(0.01)	
Specific Moral Values	11.35%	7.83%	14.35%		10.32%		8.11%	
	(0.02)	(0.02)	(0.03)		(0.02)		(0.00)	
Multi-cultural Awareness	18.98%	13.10%	~	9.68%	**	12.91%	~	10.03%	***
	(0.03)	(0.02)	(0.02)		(0.02)		(0.00)	

Table 5. California SASS data intra-state principal priorities

|	Overall						Interactions	
	Low SES	Mid SES	High SES	Low White	Mid White	High White	Low SES/ Low White	High SES/ High White
Building Basic Literacy Skills	92.05	94.15	77.37*	96.14	90.41*	80.81**	98.41	73.18**
	(0.04)	(0.02)	(0.06)	(0.02)	(0.02)	(0.05)	(0.01)	(0.09)
Academic Excellence	66.47	69.56	80.61	76.03	71.18	67.45	84.74	79.88
	(0.07)	(0.04)	(0.05)	(0.06)	(0.04)	(0.07)	(0.08)	(0.06)
Occupational/ Vocational Skills	10.98	12.42	9.58	11.75	11.27	11.16	9.09	9.20
	(0.05)	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)		(0.05)
Good Work Habits/ Self Discipline	39.35	47.71	54.75	36.52	49.97	53.02	35.62	49.18
	(0.06)	(0.04)	(0.08)	(0.07)	(0.04)	(0.08)	(0.08)	(0.13)
Personal Growth	26.14	23.77	22.04	30.82	20.57	23.86	24.83	27.43
	(0.06)	(0.04)	(0.06)	(0.06)	(0.04)	(0.07)	(0.07)	(0.07)
Human Relations Skills	31.14	27.76	26.36	19.35	29.55	34.78~	21.46	32.71
	(0.06)	(0.04)	(0.05)	(0.06)	(0.04)	(0.06)	(0.08)	(0.09)
Specific Moral Values	19.65	5.27*	9.71	13.63	7.31	11.70	13.46	7.34
	(0.07)	(0.02)	(0.05)	(0.05)	(0.03)	(0.06)	(0.07)	(0.06)
Multi-cultural Awareness	14.22	19.36	19.58	15.75	19.74	17.22	12.39	21.06
	(0.06)	(0.04)	(0.07)	(0.04)	(0.04)	(0.08)	(0.05)	(0.10)

C. What types of resources do principals acquire from their local district or private sources?

Unfortunately, the SASS provides little detail on the types of resources principals have available to them or the efforts they make to acquire additional resources.

D. How do principals deploy resources within their schools?

Time is perhaps the most important resource with which a principal has to work - their own time, their teachers' time and their students' time. The 1999-2000 SASS survey asked principals about their own use of time: how often they performed several categories of responsibilities within the past month. The answers were scored on a 4-point scale, with 1 equal to never and 4 equal to every day. Although the categories classify principal time use into very broad categories, we can use the answers to get a general feel for how principals allocate their time. Principals report spending a great deal of time managing facilities, supervising staff, dealing with discipline and security, and student learning. They devote less time to professional development and curriculum supervision. Figure 2 illustrates these results.

Figure 2. Inter-state Date on Principal Time Use from the Schools and Staffing Surveys
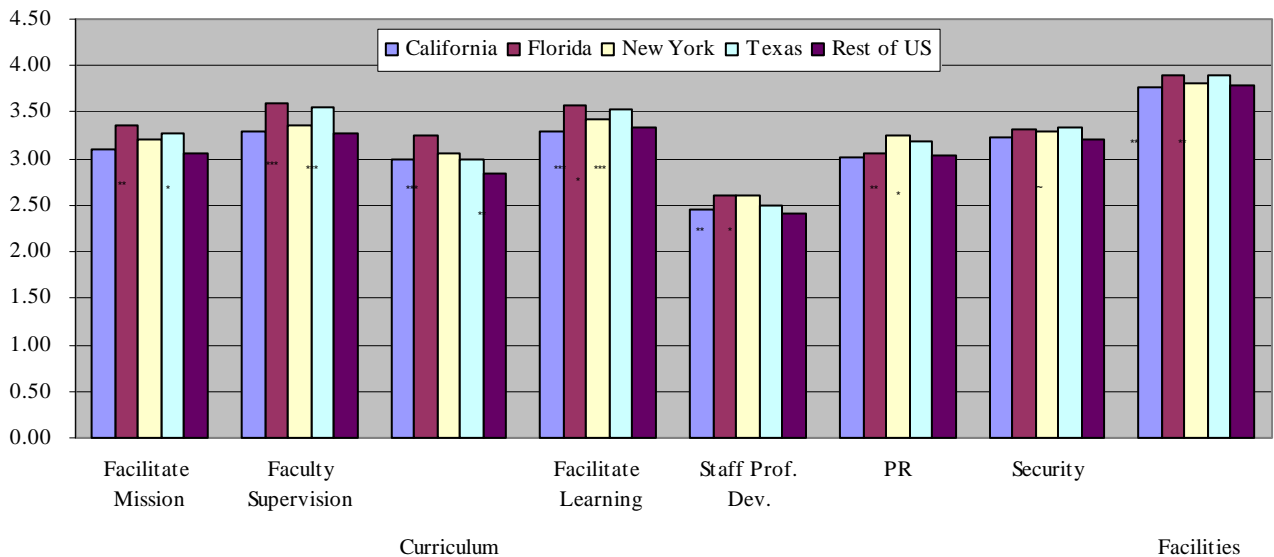
California principals report performing each task cited less often than their peers in Florida, New York, and Texas. California's principals report spending their time in a way more similar to the "rest of U.S." than to Florida and Texas. We cannot tell whether California principals allocate their time to other activities or simply view their total time differently than principals in the other large states. While these findings are somewhat broad, it does indicate that principals may be occupied with more short-run issues at the expense of allocating the time to form a cohesive learning community. Unfortunately, SASS does not provide other detailed information on resource allocation.

E. What supports or constraints do principals feel from their district or other actors?

The Schools and Staffing Surveys asked principals to rank their influence over resources and other elements of their school organization and to give their perception of other actors' influence (each on a scale of one to five, with five indicating the most influence). Table 6a shows how principals rate their influence relative to how they rate the influence of their respective district and Table 6b shows how principals rate their own influence relative to the influence of their state government along the seven dimensions. California principals perceive their influence to be fairly close to (though generally slightly below) the national average. The few areas in which California principals rank slightly higher than some comparison groups are in the area of personnel management: teacher development, hiring and discipline. This perception of relative influence is an indication of how flexible principals view the resources inside the school. With the exception of student performance standards and curriculum, principals perceive their influence within the school as much stronger then the state government's. Local government at the district level, however, seems to hold a tighter grasp on the principal's ability to manage. Therefore in assessing the flexibility principals hold within their schools, the district office may play a bigger role than the state government.

Table 6a. Principals' influence relative to district influence

Ratio: Mean Principal's influence/ District Influence										
	CA		FL		NY		TX		Rest of US	
Student Performance Standards	1.05		1.05		1.20	**	1.05		1.07	
	(0.03)		(0.02)		(0.05)		(0.01)		(0.01)	
Establishing Curriculum	1.00		1.07	*	1.15	**	1.04	~	1.05	**
	(0.02)		(0.02)		(0.04)		(0.02)		(0.01)	
Content of Teacher Development	1.14		1.14		1.15		1.12		1.16	
	(0.04)		(0.02)		(0.03)		(0.03)		(0.01)	
Teacher Evaluation	1.85		1.69		2.01		1.85		1.89	
	(0.08)		(0.08)		(0.08)		(0.07)		(0.02)	
Hiring New Teachers	1.62		1.94	*	1.49		1.61		1.75	
	(0.08)		(0.08)		(0.06)		(0.05)		(0.02)	
Setting Discipline Policy	1.51		1.45		1.54		1.29	***	1.47	
	(0.05)		(0.04)		(0.05)		(0.04)		(0.01)	
Allocating Budget	1.43		1.41		1.25	**	1.41		1.50	
	(0.04)		(0.05)		(0.04)		(0.04)		(0.01)	

Table 6b. Principals' influence relative to state influence

Ratio: Mean Principal's influence/ State Influence										
	CA		FL		NY		TX		Rest of US	
Student Performance Standards	1.02		0.91	**	1.02		1.02		1.03	
	(0.03)		(0.02)		(0.03)		(0.02)		(0.01)	
Establishing Curriculum	1.04		1.03		0.99	~	1.02		1.09	~
	(0.02)		(0.04)		(0.02)		(0.03)		(0.01)	
Content of Teacher Development	1.76		1.48	**	1.62		1.65		1.77	
	(0.08)		(0.05)		(0.07)		(0.07)		(0.02)	
Teacher Evaluation	2.50		1.87	***	2.59		1.57	***	2.36	
	(0.08)		(0.07)		(0.10)		(0.06)		(0.02)	
Hiring New Teachers	3.04		2.78	~	2.74	*	2.75	*	2.98	
	(0.10)		(0.11)		(0.11)		(0.10)		(0.02)	
Setting Discipline Policy	2.13		1.77	**	2.20		1.46	***	2.19	
	(0.09)		(0.07)		(0.09)		(0.05)		(0.02)	
Allocating Budget	1.96		1.57	***	1.93		2.19	~	2.14	*
	(0.07)		(0.06)		(0.10)		(0.09)		(0.02)	

Barriers to Dismissing Teachers: California principals are more likely than those in most states' to report barriers to the dismissal of underperforming teachers. In fact, as Table 7 shows, the respondents in California were more likely than those in the 46 undifferentiated states to rate each of the six potential barriers listed in the SASS survey as a barrier.[10] This difference was statistically significant (at p<.01 or greater) for each of the four "hard" barriers: personnel policies, decisions not being upheld by third party adjudicators, tenure and teachers associations/ organizations. On average, California principals cited barriers 12 percent more often than the undifferentiated 46 states on these four barriers. The only two barriers where California was not statistically more likely cite barriers were the two "softer" barriers of inadequate assessment documentation and the stress of the process.

California's pattern of reporting barriers looks quite a bit more like that of New York and Florida than either Texas or the rest of the nation. As Table 7 shows, Texas reported five of the six barriers less often than any of the other states, though New York principals were much less likely to report the stress of the process than any of the other states. In particular, Texas principals struggle less with teacher organizations and tenure than do their out of state counterparts. On these two issues, Texas principals cited barriers 29 percentage points less often than did the rest of the nation

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[10] The survey question put to principals asked "Are the following considerations barriers to the dismissal of poor or incompetent teachers in this school?" Each issue was listed separately with a yes/no answer available. Percents reported show the percentage of principals in each category who answered in the affirmative.

and just over 44 percentage points less often than did those in California. These differences are predictable given that Texas doesn't have collective bargaining, while California does.

Table 7. SASS data inter-state principal perception of the barriers to dismissal of under-performing teachers (% who perceive issue as a barrier)

	CA	FL		NY	TX		Rest of US	
Personnel Policies	59.49%	67.23%	~	54.17%	45.11%	**	49.04%	**
	(0.03)	(0.03)		(0.03)	(0.03)		(0.01)	
3rd Party Adjudicators	38.21%	37.01%		38.48%	20.49%	***	28.66%	**
	(0.03)	(0.03)		(0.04)	(0.03)		(0.01)	
Inadequate Assessment Documentation	32.60%	33.26%		34.02%	22.99%	*	31.51%	
	(0.03)	(0.03)		(0.03)	(0.02)		(0.01)	
Tenure	83.21%	79.56%		76.69%	36.20%	***	68.48%	***
	(0.02)	(0.03)		(0.03)	(0.03)		(0.01)	
Teacher Associations/ Organizations	78.42%	78.32%		70.45%	~	36.86%	***	63.06% ***
	(0.03)	(0.03)		(0.03)	(0.02)		(0.01)	
Process too Stressful/ Uncomfortable	43.36%	44.89%		24.52%	***	35.36%	~	39.88%
	(0.04)	(0.03)		(0.03)	(0.03)		(0.01)	
What % of teachers at a high level?	77.26%	79.17%		81.51%	**	85.55%	***	80.38% *
	(1.20)	(1.34)		(1.07)	(0.75)		(0.24)	

Table 8. SASS data intra-state principal perception of the barriers to dismissal of under-performing teachers (% who perceive issue as a barrier)

	Low SES	Mid SES	High SES	High Color	Mid Color	Low Color	Low SES/ High Color	High SES/ Low Color
Personnel Policies	59.33%	56.96	59.47	74.68	57.54*	42.46***	71.49	45.61~
3rd Party Adjudicators	46.00	38.17	33.16	47.31	36.27	35.75	48.55	30.20
Inadequate Documentation	35.48	29.37	41.26	40.19	30.68	33.74	34.60	33.02
Tenure	83.95	84.80	78.92	79.69	87.25	78.17	83.51	77.92
Teacher Associations	81.11	77.44	77.38	90.04	81.20~	60.37**	94.64	65.05*
Process too Stressful	50.07	44.44	44.81	57.52	40.35*	45.64	57.84	43.17
What Percent of Teachers at Your School Perform to a High Level?	72.35	77.01	83.14**	73.10	78.21	79.91~	73.59	82.08~

Reporting of frustration with barriers to dismissal correlated with principals' satisfaction with their teaching staffs. On average, Californian principals reported a lower percentage of their teachers working to high levels than any of the comparison groups. Principals in Texas reported the highest level of satisfaction with their respective teaching staffs. Table 8 gives the comparisons within California. From this table it is evident the greatest differences in ability to dismiss teachers lie in inter, not intra, state differences. Despite the significant barriers principals feel in the dismissal of underperforming teachers, we will see in our own 2006 survey data that principals would be unlikely to dismiss more than one or two teachers, if given the option.

Accounting for Variation in How Principals See Barriers to Teacher Dismissal: To help explain why principals vary in their perceptions of personnel barriers we regressed the count of barriers reported by principals on school and principal characteristics. Results appear in Table 9. In the five models, the only independent variable that consistently demonstrates statistical significance is the dummy indicating a California school. The coefficient on this predictor falls between .67 and .71 in three models, each of which demonstrated significance at p<.01.

Similarly, we ran logistic regressions on whether tenure is a barrier. The dummy variable for California, when using the entire US as a sample, has an odds ratio between 3.1-3.2, statistically significant with an alpha ≥ .01 in each of the three models. No other independent variable for which we controlled showed a consistently significant relationship to the independent variable. Table 10 shows abbreviated results of the logistic regression for each of the six barriers.[11] As mentioned, tenure appears to be the barrier most disproportionately felt by California principals. However, California principals do seem to perceive greater barriers that do their peers in other states, demonstrating a consistently positive and statistically significant relationship with the barriers of personnel policies, lack of support from third party adjudicators and teacher organizations. The stress of the process consistently has a positive, though not statistically significant relationship, with California. The only barrier that is not felt more keenly by California principals is that of inadequate assessment documentation.

Interestingly, the relationship between barriers to dismissal and student population is also different in California than in the rest of the nation. While across the country, schools with a higher proportion of students in poverty appear to have greater difficulty dismissing teachers,

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[11] Please note that one or more parameters could not be estimated in multiple BRR replicates in model 3 for tenure, teacher organizations and stress of process. These models were therefore omitted.

particularly due to personnel policies and third party adjudicators, this is not the case in California.

Table 9. Regressions on Sum of Barriers to Dismissal of Under-Performing Teachers

	US	US	CA	US	CA
California	0.71**	0.68**		0.68**	
	(0.15)	(0.17)		(0.17)	
% Students Receiving Free Lunch		0.14	-0.19	0.13	-0.19
		(0.11)	(0.14)	(0.10)	(0.45)
Hispanic Teacher		-0.05	0.10		
		(0.10)	(0.08)		
Black Teacher		-0.08	-0.14		
		(0.07)	(0.11)		
Asian Teacher		0.04	-0.03		
		(0.14)	(0.07)		
Teacher Native American		0.11	0.18		
		(0.09)	(0.13)		
Hispanic Principal		0.02	0.07		
		(0.22)	(0.14)		
Black Principal		0.26	0.05		
		(0.15)	(0.24)		
Asian Principal		0.70	0.41*		
		(0.40)	(0.20)		
Native American Principal		-0.02	0.57**		
		(0.25)	(0.12)		
Female Principal		-0.01	0.04	-0.01	0.45
		(0.07)	(0.12)	(0.07)	(0.35)
Interaction, Latina Principal, NLA		-0.22	-0.20		
		(0.40)	(0.27)		
Interaction, Black Female Principal, NLA		0.01	0.16		
		(0.19)	(0.26)		
Interaction, Asian Female Principal, NLA		-0.39	0.03		
		(0.75)	(0.46)		
Interaction, Native Am. Female Principal, NLA		-0.21	0.00		
		(0.38)	(0.00)		
Elementary		0.001	0.10	0.004	-0.02
		(0.06)	(0.08)	(0.06)	(0.25)
Middle School		0.06	0.10	0.06	-0.17
		(0.06)	(0.12)	(0.06)	(0.37)
Non-white Teacher, NLA				-0.03	0.09
				(0.06)	(0.18)
Non-white Principal, NLA				0.17	0.25
				(0.11)	(0.47)
Interaction, Female Principal of Color, NLA				-0.06	-0.14
				(0.19)	(0.75)
Observations	39633	39633	39633	39633	39633
R-Squared	0.02	0.02	0.07	0.02	0.02

Standard errors in parentheses. * significant at 5%; ** significant at 1%

Table 10. Logits of Barriers to Dismissal of Under-Performing Teachers

		US	CA	US
Personnel Policies	California	1.91**		1.67*
		(0.38)		(0.39)
	% Students Receiving Free Lunch		0.52	1.62**
			(0.34)	(0.19)
3rd Party adjudicators	California	1.70**		1.56*
		(0.28)		(0.28)
	% Students Receiving Free Lunch		0.70	1.39*
			(0.61)	(0.22)
Inadequate Assessment Documentation	California	0.98		1.03
		(0.19)		(0.20)
	% Students Receiving Free Lunch		1.27	1.21
			(0.99)	(0.19)
Tenure	California	3.14**		3.21**
		(0.77)		(0.86)
	% Students Receiving Free Lunch		1.13	1.00
			(0.14)	(0.13)
Teacher Organizations	California	2.92**		2.73**
		(0.61)		(0.64)
	% Students Receiving Free Lunch			0.84
				(0.10)
Stress of Process	California	1.19		1.27
		(0.22)		(0.26)
	% Students Receiving Free Lunch			0.84
				(0.11)

The first model contains no additional controls; the second and third models include teacher race/ethnicity, principal race/ethnicity, school level and the interactions between teacher and principal race/ethnicity.

Summary – California Principals in National Context

The analyses in this section indicate that:

- California principals are more likely to value basic skills than are principals in other states, where work habits and personal growth get relatively more emphasis. This is particularly true in schools serving a large proportion of low-income students.

- Principals nationwide report spending a great deal of time managing teachers and other staff, but significantly less on teacher professional development; California principals spend even less time on these two tasks than do principals in the comparison states.

- Principals in California perceive greater barriers to firing ineffective teachers than do those in other states. As a result perhaps, California principals, especially those in schools with high levels of students on free or reduced lunch, report lower levels of satisfaction with the quality of teaching at their schools.

- While there is substantial variation across principals in their responses to the survey questions, in most areas these differences were not systematically correlated with measured characteristics of schools or the student population they served. In particular, while schools with a higher proportion of students in poverty report having greater difficulty dismissing ineffective teachers nationally, this was not the case in California.

III. PACE Survey of California Principals, 2006[12]

The SASS data above help to illuminate the backgrounds of California principals, their goals, the influence they feel, and factors inside and outside the school that impinge upon their creative use of resources. However, in order to more fully delve into our core research questions, which focus specifically on resource acquisition and deployment, we designed a new survey. The Appendix includes the full protocol, which required approximately 45 minutes to complete. It asked about principals' own attributes, their educational aims and priorities, the types of revenue flows coming into the school, the activities and kinds of organized change that principals supported with fungible resources (e.g., analysis of student data, teacher development, lengthening instructional time), and the support and barriers they experienced (emanating from the district office, labor unions, local site councils, and parents).

Survey Method and Principal Sample

We sampled principals to reflect the diversity of schools across California. To do this we drew a stratified random sample of districts, first dividing districts into elementary, high school and unified districts and further dividing unified districts into three size groups (based on average daily attendance).[13] After drawing districts randomly within this stratification scheme, we randomly selected three schools within each elementary district, two high schools from each high school district, and three elementary and two high schools from each unified district. If a district did not have this target number of schools, we selected as many schools as possible.

This procedure yielded a widely diverse set of schools situated in a variety of districts across the state. Table 11 details the counts of districts and schools drawn, along with the response rate per

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[12] PACE is Policy Analysis for California Education.

[13] Small unified districts included those with average daily attendance (ADA) of less than 5,000 children; medium-size districts included those with ADA ranging from 5,000 to 19,999; large districts had ADA counts of 20,000 children and above. Los Angeles Unified was excluded from the sampling frame.

type of school. A total of 267 principals responded to the survey out of total sample of 423 (a 63 percent response rate).

Table 11. Principal Resources Survey – Sampling Frame and Response Rates

| | California Public School District Types | | | | |
	Elementary	High School	Small Unified *(under 4,999)*	Medium Unified *(5,000 - 19,999)*	Large Unified *(above 20,000)*
Count of statewide districts	533	86	165	104	57
Count of districts sampled	80	23	30	21	16
Count of schools sampled	120	34	99	94	79
Count of principals responding	68 [57%]	22 [65%]	53 [54%]	66 [70%]	34 [43%]

A. What are the background characteristics of principals and do these attributes differ across differing kinds of schools or locations?

Table 12 reports attributes of our sample of principals, split between elementary and secondary schools and for schools serving differing shares of children from poor families (eligible for subsidized lunches). Female principals are more concentrated in elementary schools, making up two-thirds of all principals. In contrast, just 30 percent of high school principals are female. The average principal is 52 years of age, with no marked differences between elementary and secondary schools. Elementary principals are bit more experienced, working in their current district for 7.3 years and in another district as a principal for 2.1 years, on average (for a total 9.4 years). High school principals have worked in their current district for 5.3 years and in another district 1.5 years (total, 6.8 years). Overall, one-third of principals have four years or less total experience as a principal (in their present or any other district).

California principals remain overwhelming white in ethnic membership: 89 percent and 90 percent of all elementary and secondary school principals are white, respectively. Even schools serving large concentrations of students from low-income families are led by white principals (84 percent).[14] The share of principals who are of Asian descent, while very small, is now larger than the share who are African American.

Secondary school principals report earning about $16,000 more per year than elementary principals. Those working in schools with smaller concentrations of students from low-income families earn about $7,000 per year more than those working in poorer communities, despite no

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[14] We define districts that serve "large concentrations of low income students" as those serving above the median share of these students.

difference in experience levels. Elementary schools in poorer communities (above the median share of students qualifying for lunch subsidies) are slightly bigger than those located in better-off communities (25 versus 23 teaching posts, respectively). But high schools in poorer communities are smaller than those in more middle-class areas (55 versus 65 teaching posts, respectively) for our school sample. These differences are not statistically significant.

Table 12. Attributes of California Principals by School Characteristics

	School Level		Percent Low-Income Students	
	Elementary	Secondary	Below median (<25.5%)	Above median (>25.5%)
Percentage female principals	67	30***	55	56
Principal age (years)	53	51	52	52
Experience as a principal in current district	7.3	5.3*	6.4	7.0
Experience as a principal in another district	2.1	1.5	2.4	1.3*
Percent Asian	4	1	3	4
Percent Black	1	2	1	1
Percent Latino	6	7	3	11
Percent White	89	90	93	84
Gross annual salary (median, dollars)	91,000	107,000***	98,000	91,000***
Count of teaching posts, size (median)	24	61***	37	32
Elementary			23	25
Secondary			65	55

B. What educational goals and priorities do principals pursue?

We asked principals to list their top three "educational goals for students" that they would "most like to emphasize," as well as the top three goals they perceived that their superintendent emphasized. Figure 3 gives these results. Almost all elementary school principals put basic skills as one of their top 3 goals, though only approximately 30 percent listed it as their first goal. Similarly, most principals list mastery of subject material as one of their top three goals. The next most frequently cited goals are interpersonal skills and good work habits. Very few principals list test preparation, multi-cultural awareness, personal growth or workforce skills as a top priority. We will see below, however, that most principals have increased time spent on test preparation. Elementary principals perceive that their superintendents have similar goals, though significantly more emphasis on preparation for standardized tests.

The findings for high school principals are similar with basic skills and mastery being the strongly emphasized areas. Moreover, high school principals perceive that their superintendents care

more about test preparation than they do. This latter result may suggest that principals are not feeling accountability pressure as directly as are superintendents; that they are feeling the pressure but feel that it is coming from their superintendent instead of the state; or they believe that they best respond to these pressures by emphasizing the other areas. These learning priorities do not differ significantly across schools serving different students.[15]

Figure 3. Top priorities of principals and their perception of superintendent's top priorities
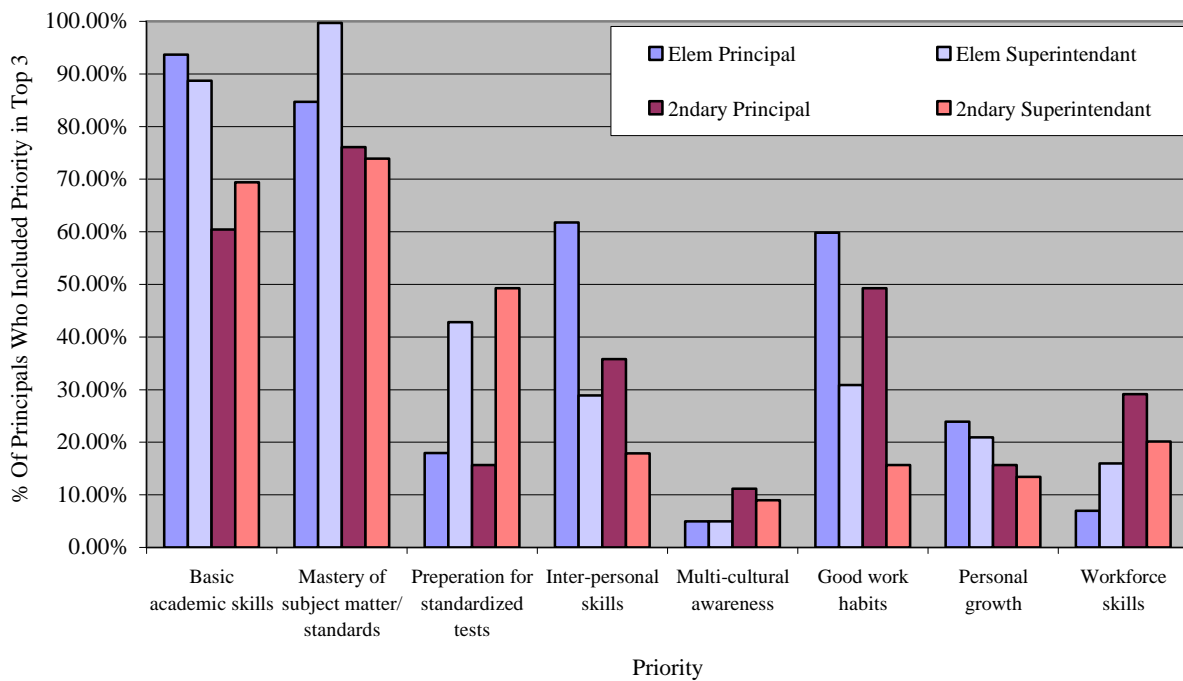
C. What types of resources do principals acquire from their local district or private sources?

Categorical grants: Principals reported whether they received categorical funding streams and, if so, the amount of revenue received in the 2005-06 school years. The median elementary school benefiting from Title I received $35,000 during the school year; the median such high school received $125,000, though a much smaller percent of high schools received these funds. Among elementary principals, 59% reported receiving Title I dollars, falling to 36% among secondary principals. Principals may under report receipt of categorical aid, seeing some sources (e.g., class-size reduction dollars) as institutionalized, non-fungible pieces of their operating budget. In reality,

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[15] To address this question we ran regression models of area of emphasis on school size, district size, school racial/ethnic composition, and the percent of students receiving subsidized lunch. None of the variables were statistically significant predictors of goals.

many principals just didn't know what proportion of their budgets was made-up of categorical dollars. Ninety-four percent of all principals reported receipt of School Improvement Program (SIP) funding, a program begun in the 1970s, originally targeted at schools in low-income communities. Just 3% of principals report participating in the state's High Priority Schools program (the successor to II-USP).

Private contributions: Table 13 reports levels of private fundraising, either from PTA's and community members or through grants from foundations and private companies in the prior school year. About three-fourths of principals reported revenues from PTAs and local individuals (including parents). Elementary schools raised only about $11,000 (median) from these sources annually; high school principals reported median revenues of $25,000. Fund raising with outside companies or benevolent foundations was less common: about 30 percent of all principals reported this activity. Of those receiving these funds, the median elementary principals raised just $3,000 in this way; while the median secondary principal raised $7,000.

Table 13. Fundraising Last School Year from PTAs or Private Organizations

| | Funds from PTAs or community | | Funds from foundations or companies | |
	Median dollars	Per pupil	Median dollars	Per pupil
School level [16]				
Elementary schools	$15,000	$35.98	$3,000	$8.98
Secondary schools	$25,000	$27.70	$7,500	$7.49
Social class, ethnicity				
Higher-income families[17]	$30,000	$47.24	$6,000	$8.98
Lower-income families	$10,000	$14.18	$2,500	$7.06
Mainly white students[18]	$24,000	$45.39	$6,000	$12.51
Mainly students of color	$12,000	$14.92	$3,500	$5.97

Schools serving higher income students raise almost three times per pupil from all private sources combined than do school in poorer communities. After splitting schools along the median share of students eligible for lunch subsidies, we see that schools serving "higher-income families," that is, those below the median, received about $30,000 in PTA or individual contributions in the prior year, and $6,000 from private organizations. These donations translate to $47.24 per pupil enrolled from PTAs and $8.98 per pupil from private organizations. In contrast, schools falling

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[16] Among elementary schools, 79.6% of principals reported revenue from PTA or individual community members, and 74.7% of high school principals reported revenue from these sources. Just under half (49.6%) or elementary principals reported revenue from private foundations or corporations, and 27.6% of high school principals reported income from these sources.
[17] Schools split between those above or below the share of students enrolled who qualify for lunch subsidies (median equals 24.5%).
[18] Schools split between those above or below the share of students who are white (median equals 51.7% white).

above the median share of students with lunch subsidies brought in $10,000 per year from PTAs, or just $14.18 per pupil, and $2,500 from private organizations, or $7.06 per pupil. The per pupil sums are small for the vast majority of high or low income schools in the state, though the differences between schools serving predominately low-income or students of color and other schools is significant

Volunteer staffing: Many schools rely on unpaid volunteers for a wide range of staffing responsibilities. Figure 4, for instance, shows that elementary schools rely on volunteers to help staff classrooms: 55 percent said that they rely on volunteers "a great deal" to help staff classrooms, and another 34 percent said, "sometimes." Elementary principals also draw on parents and other volunteers for tutoring (15 percent, great deal; 34 percent, sometimes) and clerical assistance (17 percent, great deal; 24 percent, sometimes). High schools rely on volunteers more heavily for organizing after-school and sports activities tutoring (35 percent, great deal; 41 percent, sometimes).

Figure 4. Frequency Volunteers provide support (0-3 scale, never to a great deal)
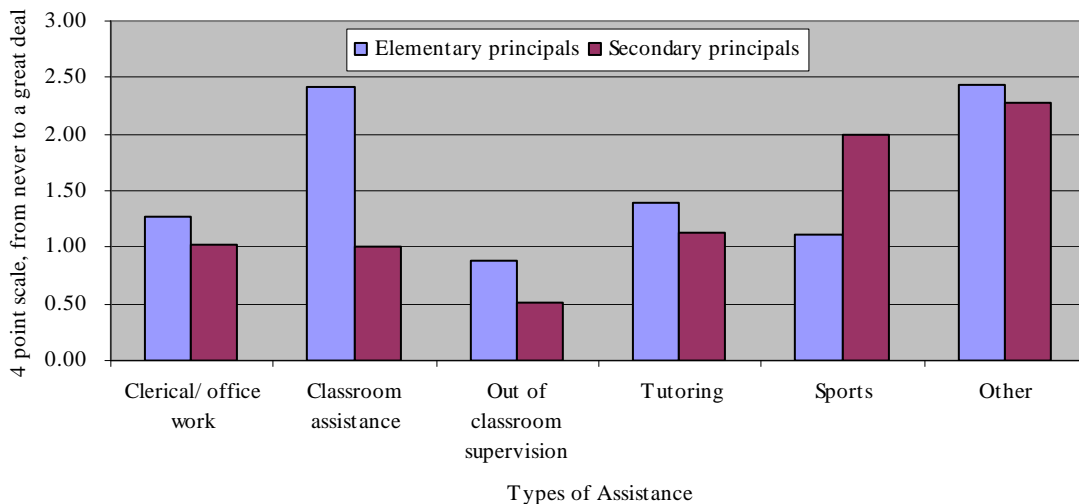
The use of volunteer labor is significantly more common in elementary schools and in schools that serve smaller shares of students from low-income families (based on an index of the five areas of volunteering, alpha=.68). Principals in better-off communities reported substantially more frequent use of volunteers to provide clerical work, adult supervision at morning arrival or playground duty, tutoring, and to help run sports activities, compared with principals in poorer

communities. The mobilization of volunteers to work in classrooms occurred at similar levels between the two sets of schools. For example, as shown in Table 14, dividing elementary schools in half based on the percent of students receiving subsidized lunch, 76 percent of high income principals report substantial reliance on volunteers for classroom assistance, compared with 38 percent in lower-income schools; these numbers are 24 percent vs. seven percent for clerical assistance and 22 percent vs. five percent for tutoring. Overall the difference in volunteer time between low-income and high-income schools appears to be a greater source of resource disparity than are contributed dollars.

When we estimated the intensity with which principals reported using volunteer labor via a regression model, we found that elementary principals, female principals, and those working in non-poor communities were significantly more likely to use volunteers (coefficients significant at $p<.001$, $p<.04$, and $p<.001$, respectively). Volunteer assistance represents a source of resource inequity for which no official data exist.

Figure 4. Percent Elementary Principals Reporting Reliance on Volunteers

	High Income		Low Income	
	A Great Deal	Sometimes	A Great Deal	Sometimes
Clerical	23.5	24.7	6.7	22.7
Classroom	75.6	20.7	38.0	49.4
Supervision	11.4	24.1	1.3	20.0
Tutoring	22.2	35.8	5.2	39.0
Sports	13.0	36.4	9.1	26.0

Professional development: Professional development was commonly cited by principals as a resource for staff. Principals in poor communities tended to utilize development workshops offered outside their own school, compared with principals in non-poor areas who reported that development activities were more steadily crafted by the principal and teachers inside their respective schools ($p<.05$). A regression model including individual attributes, shows that older principals were more likely to have a role in shaping professional development activities, along with their teachers, compared with younger principals, after taking into account the school's organizational context characteristics ($p<.03$).

D. How do principals deploy resources within their school?

Time management: To probe principals' use of time, the survey asked about the principal's major tasks Principals responded on a five-point scale, ranging from "never" to "at least once per day." Figure 5 shows that principals report spending considerable time interacting with parents, followed by interacting with district staff and attending to discipline problems. Principals, on average, spend as much time complying with funding regulations and doing paperwork as they dedicate to assessing individual teachers and helping them mesh with curricular standards. Elementary principals, interestingly, report spending more time on "dealing with student discipline problems" than do secondary principals, perhaps due to delegation of this function to other staff at the high school level. Discipline and brush-fires, more generally, may take away from principals' time that could be dedicated to instructional leadership. This may be a more significant concern for elementary principals without supporting staff than for high school principals.

Figure 5. Time principal spends on activities (0-4, from never to once/day)
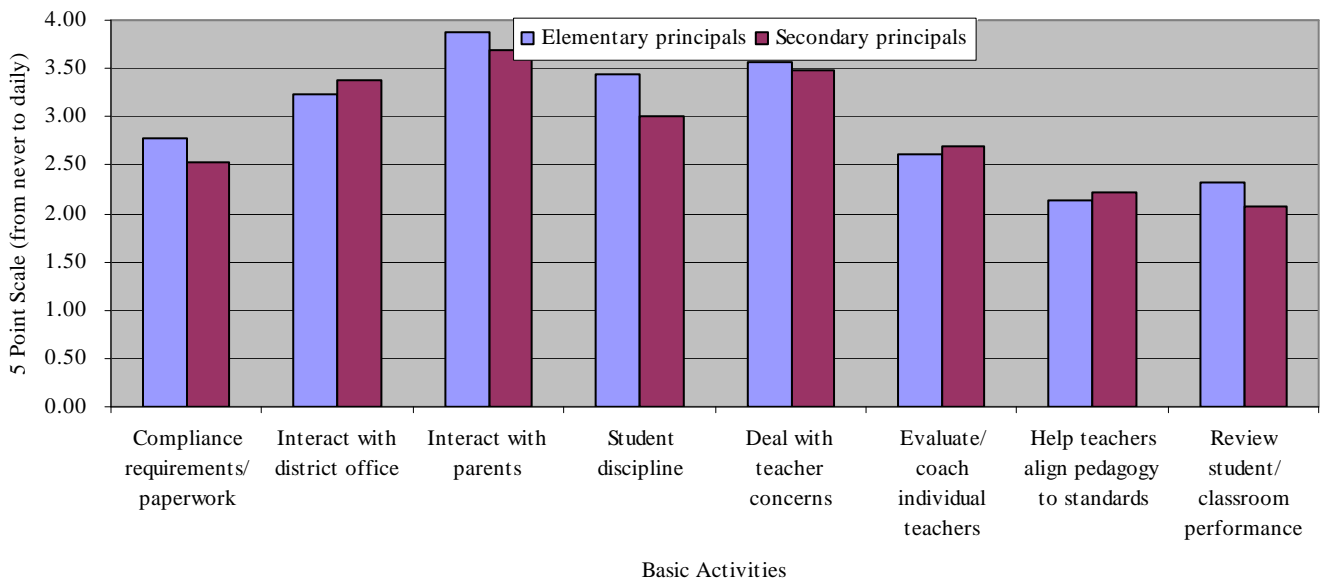
A large share of principals have worked to restructure the use of time, including spending more time on reading and English language arts, as well as lengthening the total amount of instructional time available to students. Figure 6 reports on the percentage of principals who have adjusted time in some way. For example, 80 percent of elementary principals and 71 percent of high

school principals have increased time spent on reading and language learning over the past two years. About two-fifths of elementary and three-fifths of high school principals have increased the amount of time spent on test preparation. Over two-thirds of the principals have created or expanded after-school or Saturday schools. Those working in poor communities reported more lengthening instructional time (a simple count of the options above) than principals working non-poor communities ($p<.04$).

Figure 6. Percent of principals who have lengthened instructional time
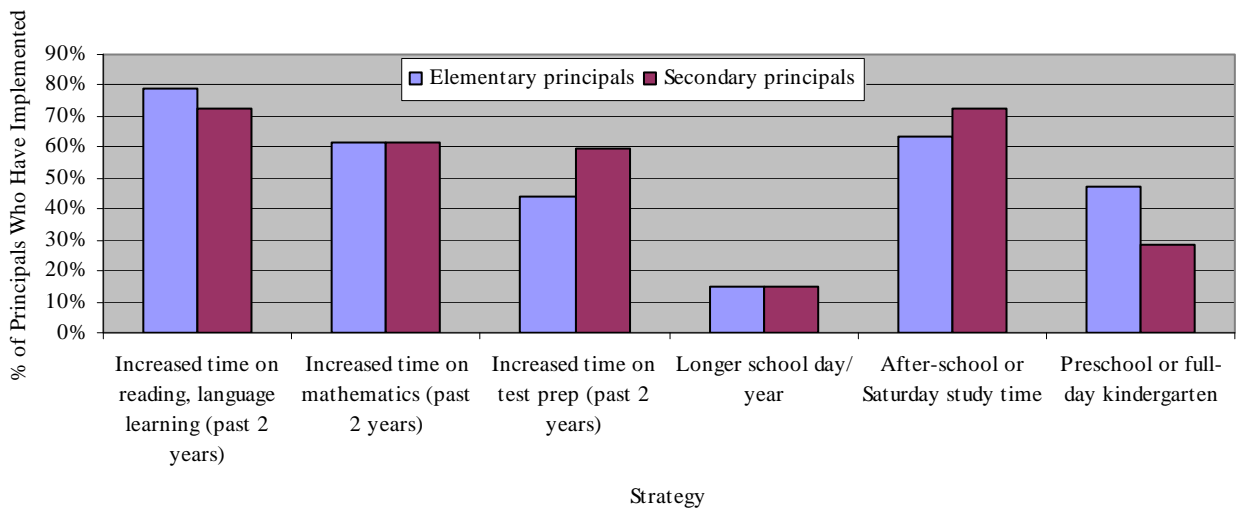
Assigning Teachers – strategic thinking? Principals can use teacher assignment strategically to help them towards their goals. Our survey asked principals about the extent to which they considered different factors when assigning teachers. Figure 7, for instance, reports on the criteria that principals emphasize in assigning teachers to particular classes (a four-point scale, from "no emphasis" to "a great deal of emphasis"). Subject matter expertise is the most salient criterion, especially for high school principals, followed by a reported desire to assign stronger teachers to weaker students and time for joint preparation by teachers. But institutional rules and constraints are weighed by principals, as well; contract provisions and teachers' own preferences are weighed significantly, along with seniority, more weakly.

Figure 7. Criteria for assigning teachers (0-3 scale; no emphasis to a great deal)
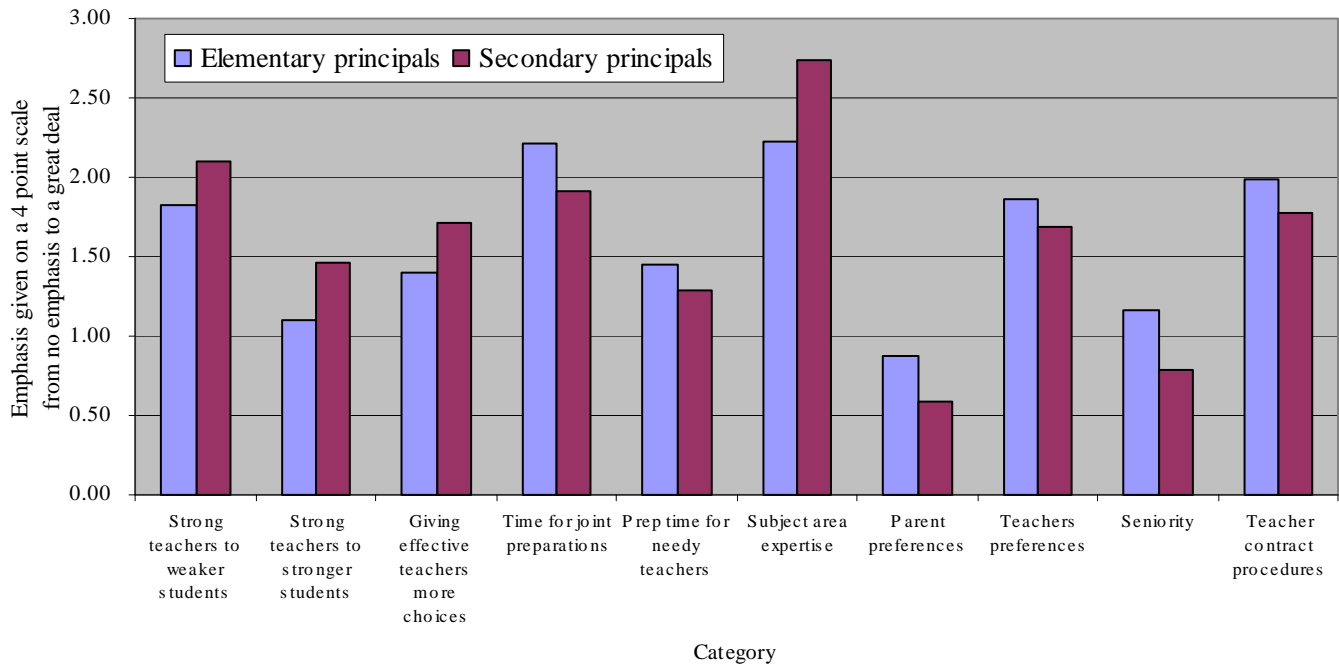
We created an index from the responses described above to distinguish principals who assigned teachers strategically from those who did not. When reporting on the criteria employed in assigning teachers to grade levels, subject areas, or courses, many principals emphasized the importance of contract procedures, seniority, and teachers' own preferences.[19] Other principals allocated teachers more strategically: assigning strong teachers, for example, to weaker students or creating more planning time during the day. Principals tended to belong to the former group – sticking to the rules and procedures – when they led elementary schools and when they served children from more affluent families. High school principals and those in lower-income communities placed less emphasis on procedural rules.

We constructed an index from several items indicating the principal's inclination to follow district rules, standard personnel practices, and labor contract provisions (alpha=0.57). Estimating levels of "following rules" via our basic regression model, we found that female principals and more experienced principals were more likely to follow formal procedures, although at marginal levels of statistical significance ($p<.07$, $p<.08$, respectively).

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[19] The index for emphasizing seniority and contract provisions was internally reliable, alpha=.65. Earlier research has found that some principals attend more strong to compliance demands, set out in rules governing personnel practices or categorical aid; other principals are more entrepreneurial and focused on improving teaching and learning (e.g., McColskey, Altschuld, & Lawton, 1985; McLaughlin & Talbert, 2001; Hess, 2006).

Hiring New Teachers: Principals also can be strategic in trying to improve the quality of their school by hiring new teachers. We asked principals about the criteria they stressed when attempting to recruit a new teachers (four-point scale, from "not important" to "essential"). The most salient criterion – for both elementary and high school principals – was the candidate's "fit with the school philosophy or educational approach." This criterion was significantly stronger among principals in poor communities and those who led larger schools (enrollment size; $p<.08$, $p<.02$, respectively). Figure 8 displays these results. Principals emphasized certification and the importance of recommendations from within or outside the district, along with subject matter expertise (the latter, especially among high school principals). Principals rarely looked at student performance data to see how well the candidate's pupils had performed; nor were bilingual skills or teachers' own academic performance of particular importance in the eyes of the principals. In keeping with the literature that finds no relationship between masters' degrees and teacher effectiveness, principals tend not to consider these degrees in selecting teachers. On the whole, while only some principals are strategic in assigning teachers, almost all are strategic in selecting new teachers.

Figure 8. Criteria For Hiring teachers (0-3 scale: not important to essential)
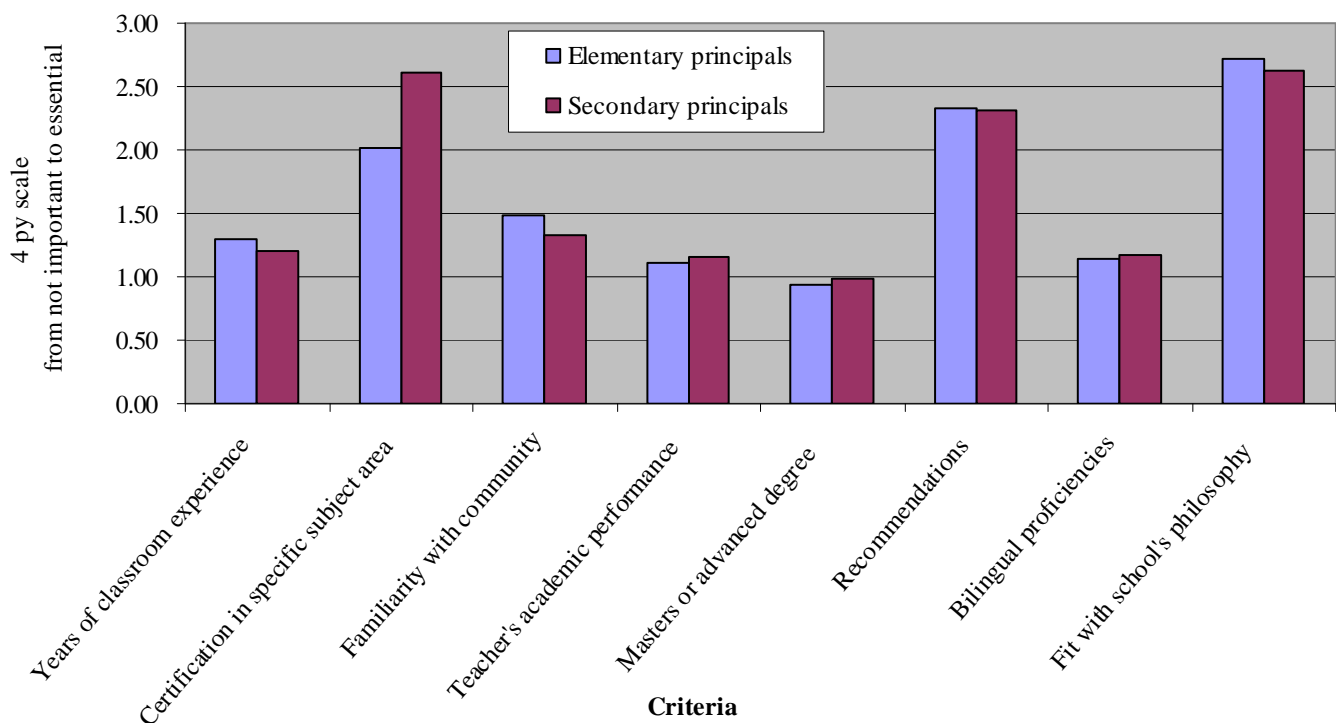
Regression analysis shows that controlling for school size, school level and student demographics, principals in larger districts stress experience in hiring new teachers, compared with those situated in smaller districts ($p<.03$). High school principals and those in poor communities weight experience less heavily (both coefficients, $p<.001$).

When it comes to teacher hiring, principals feel that districts offer support while retaining their own authority over final decisions. Figure 9 shows that while district staff primarily do the recruiting of new teachers, principals maintain authority over short-listing and making the final hiring decision. Still, a large proportion of principals reported that districts control the short-listing of candidates, which constrains who principals get to interview. In the regression analyses we find that principals working in larger districts reported much less influence in the teacher hiring process overall, compared with those working in smaller districts ($p<.0001$).

Here we skip principals' perceptions of the process for firing or transferring teachers and address it instead in the section on the constraints that principals face from state policies, contract agreements, and district rules in their attempts to deploy resources strategically. Principals also reported on the share of teachers who had departed from their school over the past two school years. We found that this rate of teacher turnover was higher in secondary schools than elementary schools, and lower in larger, compared with smaller, schools ($p<.01$, $p<.003$, respectively).

Figure 9. Principals' perceptions of control over hiring (5 point scale from -2, district has total control, to 2, principal has total control)
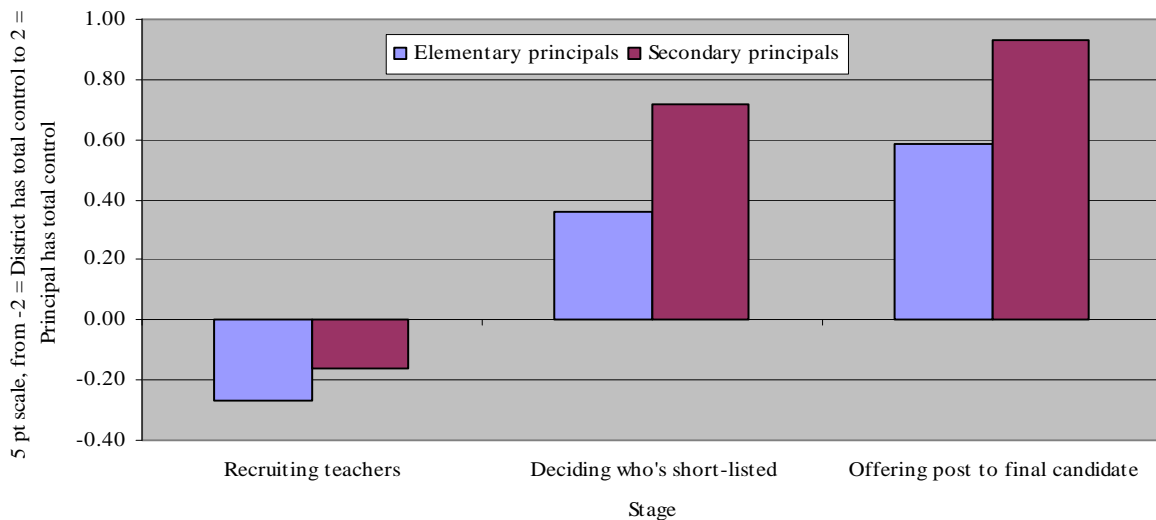
Use of Student Performance Data: Principals can pursue their educational priorities by taking advantage of student achievement data, more readily available under standards-based reform. We asked principals about the frequency with which student data were used (five-point scale, from "never" to "weekly"). Figure 10 reveals that principals occasionally use student data, but rarely in ways that affect teacher assignments or incentives. Principals do tend to use achievement data to identify struggling students. However, the mean scale score of 2.1 indicates discussions "every few months," reported by both elementary and secondary principals. Among elementary principals, 37 percent said they used data for this purpose "at least monthly" or "weekly"; 35 percent of secondary principals reported these levels of frequency. In the regression analyses, principals in poor communities reported more frequent engagement with student achievement data than those in non-poor areas ($p<.006$). This may be, in part, a predictable response to having more students who are falling behind.

Figure 10. Ways principals employ student test data (0-4 scale from never to weekly)
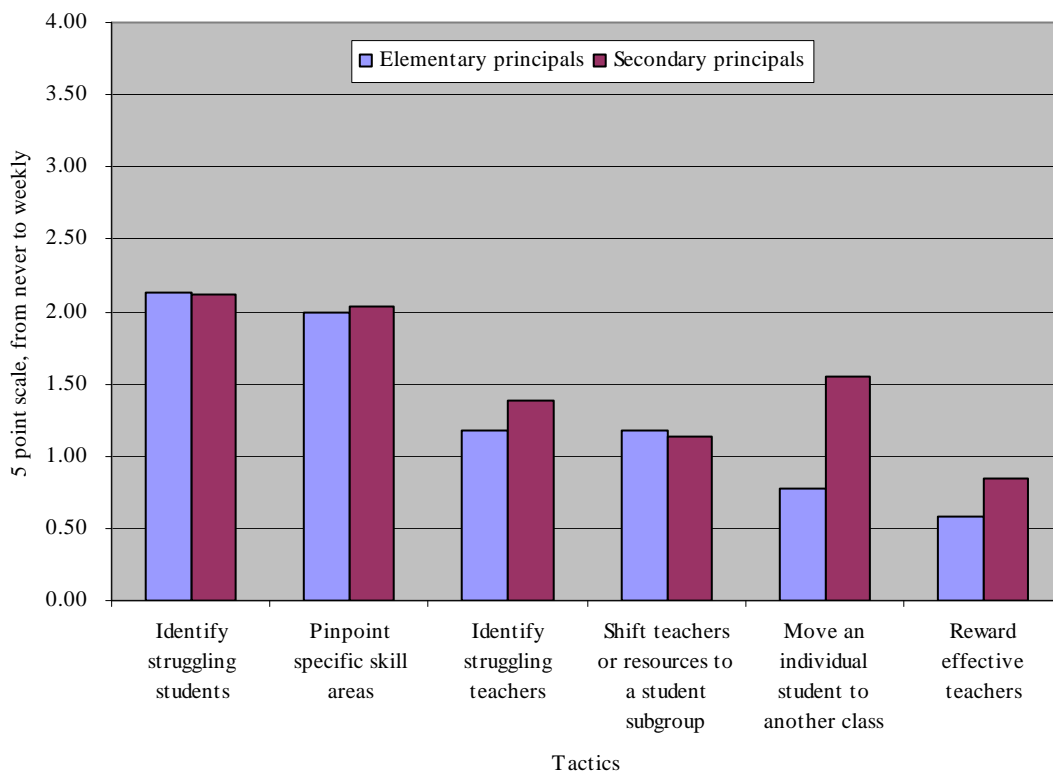
When it comes to consulting student performance data to identify weak teachers, the information is typically used only "one or twice a year." Performance data is used even less frequently to reassign a student to a class or teacher that might be a better match. These data are almost never used to recognize or reward an effective teacher (i.e., as a way to allocate incentives). Principals working in lower-income communities reported spending more time reviewing student data, but we can account for only a small share of the variance.

We also asked principals how many hours they spend over the entire school year "meeting with teachers individually or in groups to review student test data." Elementary principals reported spending 26 hours total over the course of the school years; high school principals allocated just 24 hours to this activity (or about 20 minutes per teacher, given the size of their teaching staff).

E. What supports or constrains do they feel from their district or other actors in how they deploy resources?

As principals gather resources and consider their goals, they appear both to receive support and to confront a variety of institutional constraints. Many of our survey questions delved into factors that serve as enabling supports or debilitating restrictions. First, the survey asked principal about the need for change and improvement in their schools along the following ten dimensions: more flexibility in allocating dollars/resources that are used for your school, more teachers, more dollars for resources other than teachers, greater freedom to hire the teachers that you want, greater freedom to dismiss ineffective teachers, greater flexibility to schedule teachers within the school, knowing the budget earlier in the year, additional professional development for teachers, additional help analyzing student achievement data, fewer paperwork requirements from the district and/or the state. The respondents ranked each of these on a four point scale from "change not needed" to "change is essential."

Figure 11 displays the results. Both elementary and high school principals rated "more freedom to fire teachers" as the most important factor, more important even than additional dollars. More dollars, more flexibility in allocating dollars, knowing the budget earlier, additional professional development and less paper work were also important to principals. In general, the principals do not appear to need more hiring freedom or more support from their district business office.

Figure 11. Principals' Perceptions of Changes Needed to Help Raise Student Outcomes
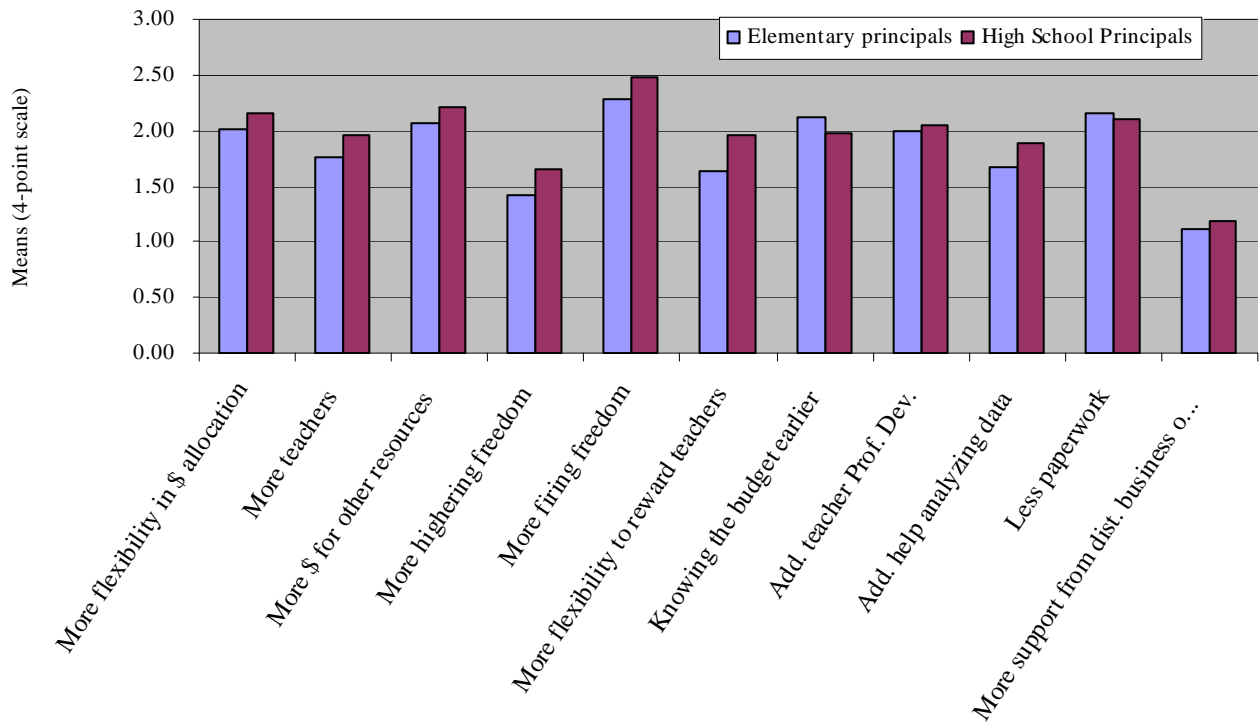
We created an index of all the items in Figure 11 (alpha=0.74), to assess principals' overall need for change. A regression model controlling for five organizational features of the school (district and school size, school level, the percent black and Hispanic students, and percent of students receiving subsidized lunch) shows that secondary principals and principals working in larger districts expressed greater desire for improvements (both coefficients significant at $p<.02$).

Who lends support to principals? One of the survey questions asked the principals whether they would be able to increase the instructional time spent on reading if they wished to and to what extent each of a set of actors would be a help or a hindrance in making this change. Figure 12 reports the results (derived from scores where the mid-point, zero, indicates "no effect" on the principal's efforts). Principals, on average, see the district superintendent and his or her staff, along with the school site council, as allies. On the other hand, union contract rules and, even more strongly, constraints surrounding categorical aid are viewed as barriers to instructional improvement.

We asked a similar question about lengthening the school day, again inquiring about who would support or resist this reform. Results were quite similar. Only one-third of principals say that they would be able to do so, even if additional funding was available. The most supportive actors, as reported by principals, are the district office (57 percent said "big help" or "some help") and the

school site council (50 percent said "big help" or "some help"). The strongest impediments to lengthening the school day were "categorical fund restrictions" (55 percent said, "mild" or "strong barrier"), and the teachers' union or negotiated contract (82 percent said, mild or strong barrier).   In this case, unlike re-allocating time to reading, the contract was a stronger barrier than categorical grants.

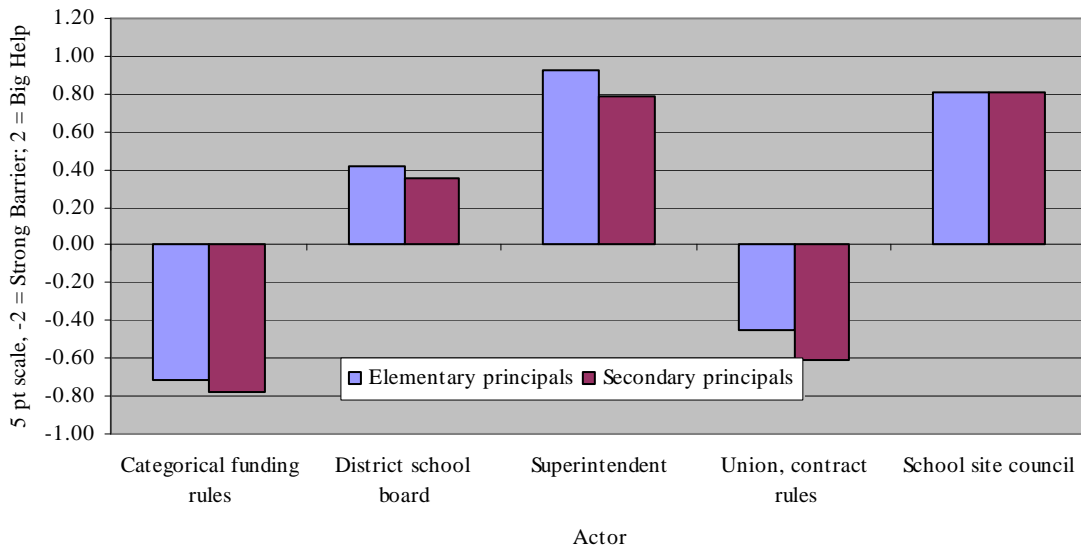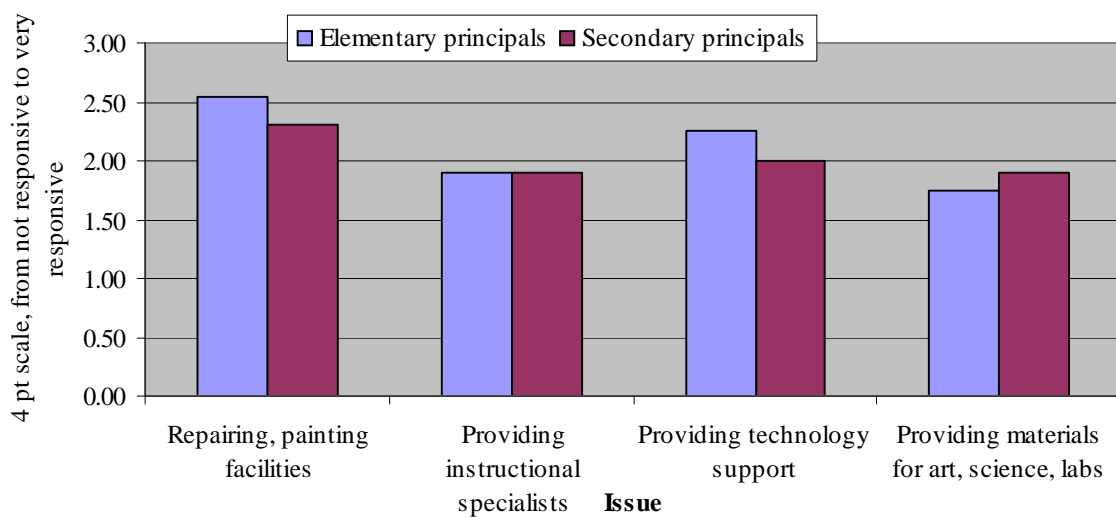**Figure 12. Perceptions of Actors as Help or Hindrance (-2, strong barrier, to 2, strong help)**

Figure 13. Perceptions of District Responsiveness (0-3 scale: not to very responsive)

Principals generally feel that their district offices are responsive in helping to address basic problems such as repairing or painting facilities. Figure 13 reports these results (four-point scale, from "not" to "very responsive"). District offices seem less responsive in providing instructional specialists and, for high schools, attending to instructional technology concerns. Both of these may be important roles for district offices.

The Ability to Dismiss or Transfer-Out Teachers: The survey also asked principals whether they felt constrained in their ability to move out teachers whom they found to be ineffective. The vast majority reported that it is "almost impossible" to get rid of a low-quality teacher who has attained tenure rights. On the other hand, principals responded between "somewhat" and "very likely", on average, that they could get a non-tenured teacher to leave their school. Elementary and high school principals expressed the same degree of confidence, on average.

The desire of principals to ease-out teachers they judge as ineffective varies by school context. Principals in poor communities reported a higher share of teachers on their staff who they would prefer to transfer out ($p<.04$), while principals in larger schools felt this less urgently, although at a marginal level of significance ($p<.10$).

Notably, though we have seen that California principals disproportionately feel that they lack the flexibility to dismiss underperforming teachers, there are only a few teachers these principals wish to remove. Of the 267 principals who returned our survey, only 158 answered our question regarding how many current teachers they would like to see leave their school. Of the 158 who did answer, 40 (25%) said zero, 41 (26%) said one, 35 (22%) said two, and only 18 (11%) said five or more. It may be that the power to dismiss teachers would allow the principal to exercise influence in the school even without dismissing teachers and it is this increased influence and not the firing of substantial numbers of teachers that is particularly important for principals' efficacy.

Summary – California PACE Survey Findings

The analyses in this section revealed several patterns:

- When asked what change would most help them improve student outcomes, principals most often cite greater freedom to fire teachers. This desire appears more important to them than additional resources of any variety. Less paperwork was the next most important factor, followed by additional dollars, more flexibility in allocating dollars and additional professional development. Each of these were more important to principals than additional teachers.

- Over three-quarters of principals report that they have increased the amount of time spent on reading and language arts in recent years. As they reshape instructional time and focus on reading, they report gaining support from the district office and the school site council, and strong resistance from unions and the negotiated labor contract. Similarly, the majority of principals report significant support from their district office and their school site council when it comes to altering instruction or lengthening instructional time. Overall, principals feel that regulatory controls on categorical aid and labor contracts present barriers to instructional reform (both lengthening the school day and increasing instructional time on reading).

- Some principals think more strategically than do others. Strategic principals worry less about teacher assignment provisions and other rules, instead focusing on student needs. A small share of principals try to incentivize more desirable assignments. Overall, principals working in high schools and lower-income communities appear to think more strategically, compared with elementary principals and those working in better-off communities. But these differences are not large in magnitude compared to the variation between principals across groups.

- Only about one-third of principals report using student performance data at least monthly. The limited use of student performance data reflects the fact that only a modest share of principals seems to be thinking strategically to improve the instructional program.

- Many schools rely on volunteers to help staff classrooms and provide tutoring, especially within elementary schools. Principals working in better-off communities report far more extensive use of volunteers, compared with their counterparts in poorer areas. These differences appear to reflect substantially greater resource disparities than do the dollars contributed.

Additional findings include:

- Principals are overwhelming white in ethnic membership. Even schools that mainly serve students of color tend to be headed by white principals.

- Salary disparities appear to between principals working in schools serving predominately low-income and better-off families. Principals in the latter setting earn $7,000 more per year than those in the former setting, despite little difference in their years on the job or in district revenues.

- Just over half of all principals report that addressing students' basic skills is the first educational priority, followed by mastery of subject material. This is consistent with the pattern seen for California principals in our analysis of the SASS data. Principals perceive that their superintendents are more keenly focused on test preparation than the priority placed on this goal by principals themselves.

- About three in four principals say they gain revenues from PTA activities or individual community members, including parents. Just under a third raise additional dollars from private companies or foundations. Dollars raised are not great, totaling about $18,000 per year for the median elementary, and $32,500 for the median high, school.

IV. Key Findings and Policy Implications

The findings presented in this paper indicate that principals' reported goals are consistent with state policy efforts - emphasizing basic skill development and, to a somewhat lesser extent, academic mastery.

Second, we find substantial variation in the extent to which principals think and act strategically. Almost all principals act strategically when hiring teachers - valuing fit with their school's philosophy and recommendations more than masters' degree attainment. However, many principals are not as strategic in teacher assignment or the use of data to target instructional practice. Principals appear to spend a good portion of their job responding to immediate needs instead of being strategic in their work. In addition, many principals are new to their jobs, and new principals appear to have somewhat less of an ability to control resources, though this in not always the case. We found surprisingly little relationship between district or school characteristics such as size or student population and the extent to which principals are strategic.

Third, principals would like additional resources. This is not a surprise. There is substantial variation in the dollars flowing into districts across the state. Our new survey indicates that volunteers are also an important resource in many schools - a resource that is much more prevalent in schools serving higher income families, and much more likely to contribute to resource differences across schools than private donations. We found that many principals would like additional professional development for their teachers - more than they express an interest in additional teachers.

While principals would like additional resources, they value more flexibility in their use of resources more than they value additional dollars or additional teachers. In particular, they feel that their inability to dismiss teachers constrains their ability to improve student outcomes. This constraint stems from state tenure policy and as well as from the teacher contract. In addition, they value reduced paperwork - stemming largely from the education code and categorical grants structures - more than additional resources. In contrast, most principals report strong support from their district and local site councils in their attempts to bolster teaching and learning.

Districts can apply for waivers of certain rules and monitoring practices, but few do. The California legislature also has allowed districts to combine categorical aid funds at the end of fiscal years to provide more flexibility. While more flexibility may be available than principals currently realize, two considerations are important: first, principals can only act on the regulations that they perceive, and, second, the process of applying for waivers itself takes time and focus from instruction. If principals are either unaware of these exceptions/ loopholes or unable to complete the paperwork to comply with them, they will act as though the flexibility does not exist.

Overall, the above results present a dilemma. Principals clearly feel constrained in their allocation of resources due both to state policies and to rules imbedded in teacher contracts. They, at least, espouse goals in keeping with stated state policies. In addition, *some* principals are thinking strategically about resources, including how to acquire stronger teachers and how to utilize achievement data to adjust instruction. Awarded with more fungible resources and less regulation and monitoring from above, these principals are likely to "manage for results." However, the potential benefits of decentralization, most notably that it makes the best use of local knowledge of needs, may need to be balanced with the potential disadvantages of decentralizing in a system in which many principals are not thinking strategically about resources and even more are in regulatory environments that keep them from acting in the ways that they want.

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APPENDIX
THE PACE PRINCIPAL RESOURCES SURVEY