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Improving Leadership for Learning



Resource Allocation

Allocating Resources and Creating Incentives to Improve Teaching and Learning

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The Leadership Issue Project

State-of-the-Field Reports

This report is one of a series produced by a research team at the Center for the Study of Teaching and Policy, a national research consortium home-based at the University of Washington. Developed with support from The Wallace Foundation during the early stages of an initiative that explores central issues in the exercise of educational leadership, the reports synthesize studies, conceptual work, and examples of current and emerging practice.

The reports are intended to clarify each leadership issue, while assembling what is known from empirical studies. The information in these reports lays the groundwork for further study and practical experimentation by leaders and reformers in states, districts, and schools.

The first report offers an overview of leadership and leadership support in relation to the overarching goal of improving learning. The remaining six explore in more detail particular issues within that terrain.



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Introduction: Resources and the Improvement of Teaching and Learning

Providing every child with an equal opportunity to learn has been a central challenge in public education. Education is often viewed as the “great equalizer,” serving as the means by which individuals can rise above the social and economic circumstances that have created longstanding barriers to reaching their potential as individuals and contributing citizens. Education alone cannot address these entrenched social problems. A variety of approaches, policies, and support systems will be required to address these issues (Levin & Kelly, 1994; Rothstein, 2004). However, education is and will continue to be one of the primary means by which inequity is addressed. Public funds will continue to be allocated in support of educational programs, and the rationale for these investments will likely continue to be made in terms of creating social equity alongside excellence. Consequently, the purposeful and productive allocation of resources to support equitable access to high-quality learning opportunities becomes a major component of education policy and leadership at the federal, state, and local levels.

Leaders at all levels of the education system are charged with making decisions about how to effectively distribute and leverage resources to support teaching and learning. However, resource allocation consists of more than assigning dollar amounts to particular schools or programs. Equally, if not more important, is the examination of the ways in which those dollars are translated into action by allocating time and people in productive ways. In this respect, leaders are concerned not only with the level of resources and how they are distributed across districts, schools, and classrooms but also with how these investments translate into improved learning. Of critical importance, resource allocation practices must reflect an understanding of the imperative to eliminate existing inequities and close the achievement gap. All too often children who are most in need of support and assistance attend schools that have higher staff turnover, less challenging curricula, less access to appropriate materials and technology, poorer facilities, and lower overall performance.

Purpose of this Paper

The purpose of this paper is to offer insights from scholarly literature, related theory, and practical activities that can inform leaders' efforts to allocate resources and create incentives that will result in powerful, equitable learning for all. This document (1) sketches the context for work and research related to resource allocation practices; (2) presents key ideas that can be used in conceptualizing this issue; (3) describes a range of practices, both commonly undertaken and emerging, that address this issue; and (4) notes central, unanswered questions about practices in the domain that can guide future experimentation and research. The ultimate goal of the paper is to stimulate thinking and inform ongoing attempts to make resource reallocation and incentives more suited to the challenges of today's contexts. The paper is intended for a wide audience, including practitioners, policymakers, researchers, and other stakeholders. It frames the "state of the field" as it is known from existing empirical research. The paper, however, does not attempt to represent the full range of experimentation and activity related to resource reallocation, much of which has not yet been systematically studied.

We begin the paper with an illustration of some of the leadership challenges that are embedded in the allocation of resources and the provision of incentives with the following vignette. This vignette offers a glimpse of the challenges facing leaders from the perspective of an urban high school.

A Visit with a High School Principal

The challenges of leading with scarce resources and limited authority to act are nowhere more vividly witnessed than in the working world of a busy high school principal. Leroy Washington has recently assumed the principalship of Port City High School, a traditional comprehensive high school located in a dense urban area serving 1,400 students. The student population has become increasingly diverse during the past 10 years, even while enrollment has decreased due to a declining number of living wage jobs. The school now serves many students of color, a growing number of English language learners, especially recent immigrants from Russia and Southeast Asia, and an increasing percentage of students living in poverty.

While the principal of Port City High does not yet know the school's students, he understands this student population and its community and has a deep commitment to serving them well. He is particularly keen that they

encounter high-quality learning opportunities in the classroom. Yet he is well aware that many have not had this experience and that neither staff nor administrators have collectively created conditions for sustained and positive learning. Principal Washington, who is just starting his first year in this administrative position (his second principalship), is replacing a principal who lasted only one school year. Instability in the principal's office is only one of the many challenges facing the school. Teacher retention has been low for several years: Many teachers leave Port City High School after only a few years for teaching assignments in more affluent schools within the district or in surrounding suburban districts. Principals in this district have only a limited role in selecting teachers to fill open positions and have few qualified applicants from which to select. Student performance on state standardized exams reveals no significant improvement in the past few years. Worse still, Port City has the highest dropout rate in the district.

The school is organized into a seven-period day, with each teacher seeing approximately 150 students per day. Complicating matters, senior members of the teaching staff continue teaching the same way they always have—even though the district has developed a new curriculum to help students meet more rigorous state standards. The district provides three days a year of professional development activities, but these activities are conducted in isolation, with little connection to the teacher's daily classroom practice. A look at Port City High School's modest discretionary budget reveals virtually no changes in the past few years. Each department receives a similar amount of money per student from year to year, an amount that is barely enough to replace lost textbooks and repair classroom materials.

Principal Washington sees all of this. He knows that these factors contribute to the school's declining performance and poor reputation. Unfortunately, the principal has little authority to address these problems and few resources at his disposal. Because the school's enrollment has been declining, the district has consistently reduced the number of positions allocated to the school. The number of positions is determined by a formula based on the school's enrollment, or projected enrollment, not the learning needs of students. Complicating matters even further, the principal faces the prospect of losing a significant amount of federal Title I revenues—the school has failed three years in a row to meet the Adequate Yearly Progress (AYP) requirements established under federal No Child Left Behind policy. Unless the

school makes AYP this year, the district will be forced to offer students who attend Port City waivers or vouchers to attend higher-performing schools.

Walking the corridors among his students, Principal Washington knows all too well that he will have few if any new resources to work with. Thus, if he is committed to transforming his school and creating opportunities for every student, he will have to work with the resources available to him (or find some way of generating additional resources), try to fulfill the long list of responsibilities expected of him (or enlist others in helping him), work with—or around—the authority provided by the district and state (asking forgiveness rather than permission when his actions might exceed a literal interpretation of his authority), and generate sufficient political capital with his teachers and other members of the school community to make headway on new initiatives. Principal Washington knows that the resources at his disposal are not all well aligned with an aggressive agenda of learning improvement. Furthermore, he understands deeply that the human resources within this school, especially the teaching staff, are not as well *developed* as they might be.

The principal also knows that the task ahead of him is not his alone and that in some ways, what he is facing within his school is a microcosm of a larger set of resource-related issues in his district and state. His district's superintendent, for example, has talked about convening a Learning Priorities Task Force, with the express purpose of developing a long-range picture of how the district can more wisely use the fiscal and human resources it has, while seeking out new sources of revenue and assistance more aggressively than in the past. Yet even this initiative will face an uphill battle against many fixed constraints and deeply rooted ideas about how to keep public education efficient, smooth running, and “not a burden” on a modest local tax base. Principal Washington makes a mental note to check in with several task force members whom he knows long before the next budgetary cycle comes to a head. He also decides that one of his first conversations at the central office will be with the head of human resources about the way teacher candidate pools are recruited

Allocating and Developing Resources as a Leadership Challenge

Like many educational leaders throughout the United States, this principal and his counterparts at the district level face a set of persistent challenges. On the one hand, they face rising expectations for student performance and increas-

ing pressure to demonstrate marked improvements in student test scores, with a specific requirement to close persistent achievement gaps. On the other, they must meet these expectations in the face of high mobility among students and staff, rigid ways of organizing time, an inadequate supply of high-quality teachers, and a limited authority to act. If powerful and equitable learning opportunities are to be provided for students at every school, then the way resources are directed to and within schools, and the discretion leaders have to configure and develop these resources, needs immediate attention.

Allocating and developing resources to support improvement in teaching and learning are thus fundamental leadership challenges. Although they alone are not responsible for the enduring inequities of public education, nor will they alone ensure that the schools make good on the promise of education as society's great equalizer, leaders like Principal Washington, his leadership team, and the groups of leaders at the central office who take these matters seriously are in a particularly good position to guide the distribution and use of resources that are a part of the solution. To that end, they and education policymakers must be informed about emerging resource practices and cognizant of the ways incentives can be used to create conditions that support teaching and learning.

Resource allocation in education does not take place in a vacuum—instead, it often reflects policy conditions that form a context in which opportunities for effective leadership can be created. For example, effective leaders know how to use data strategically to inform resource allocation decisions and to provide insights about the productivity, efficiency, and equity of resources. The roles, responsibilities, and authority of leaders at each level of the education system also impact whether and how they are able to allocate resources to particular districts, schools, programs, teachers, and students. Further, the type of governance structure that is in place also affects decisions about resources and incentives. Governance issues arise as leaders become involved in raising revenue and distributing educational resources. These activities are shared by multiple entities, including the voting public, state legislatures, local school boards, superintendents, principals, and teachers' associations. Each of these connections can provide insights into how to allocate resources and provide incentives that powerfully and equitably support learning, for both students and education professionals.

To provide a basis for understanding the nature of the leadership challenges embedded in allocating resources and creating incentives, we now turn our attention to a conceptualization of the issue, including a discussion of key leadership issues related to resource allocation and how they are informed by the available literature. We then provide some examples of common practices and emerging strategies in this area of leadership. We close with a discussion of some unanswered questions and enduring dilemmas that a close examination of this aspect of leadership practice brings to light.

Understanding How Leaders (Re)allocate Resources and Create Incentives

As we see in Principal Washington’s school, dollars alone do not fully describe the resources necessary to operate a successful school or school district. Indeed, the resources needed to actively and fully support the education system are inherently complex and require an understanding that goes far beyond assessing the level of spending or how the dollars are distributed. Educational leaders must be able to examine the ways in which those dollars are translated into action by allocating time and people, developing human capital, and providing incentives and supports in productive ways. In other words, this school’s principal and the district officials who oversee and support his work, not to mention state policymakers whose actions affect the resources he has to work with, are concerned with three basic categories of resource:

- *Money.* Activities at several levels of the system, typically occurring in annual cycles, determine both the amount of money that is available to support education and what it will be used for. No one level of the system has complete control of the flow, distribution, and expenditure of funds.
- *Human capital.* People “purchased” with the allocated funds do the work of the educational system and bring differing levels of motivation and expertise, developed over time through training and experience.
- *Time.* People’s work together happens within an agreed upon structure of time (and assignment of people to tasks within time blocks) that allocates hours within the day and across the year to different functions, thereby creating more or less opportunity to accomplish goals.

These resources are thus intimately linked to one another. Each affects the others and even depends on the others to achieve its intended purpose. An abundance of money and time, for example, without the knowledge, motivation, and expertise of teachers (human capital) does little to maximize the learning opportunities created for students. Furthermore, an abundance of

human capital without money or time to distribute it does little to alter practice in classrooms or to share expertise with others. From their position of influence over the acquisition, flow, and (intended) use of resources, educational leaders thereby undertake a massive attempt to coordinate and render coherent the relation among all three kinds of resource in relation to whatever goals they set out to achieve.

Evolving Expectations for Resource Allocation in the Context of Reform

As the goal of focusing effort on the improvement of learning becomes more central, what educational leaders are expected to do and accomplish through the allocation of resources has changed. Historically, supporters of education were more concerned with the dollar amount allocated per pupil, and they spent much of their political capital advocating for increases from one year to the next. Educational leaders were responsible for creating balanced budgets with the dollars they had available and accounting for expenditures in a responsible manner—a sufficiently complex task in large school districts. Little attention was paid to how resources were related to performance or to what type of performance was expected. The standards-based reform movement of the past several decades changed the situation fundamentally, by prompting new questions about what the learning standards should be and how educators should be held accountable for improved performance. In response, educators have become more focused on results, while taking the stance that higher performance cannot be accomplished without adequate resources. Thus, a sea change has occurred, prompting educational leaders to consider how resource allocation is related to building high-performing systems that work for all students.

If they take seriously the charge to become more learning focused, leaders critically examine the equity, efficiency, and effectiveness of *existing* resource allocation policies and practices and make decisions regarding ways in which resources might be *reallocated* in more productive ways. This resource reallocation challenge is as important in an era of standards-driven reform and accountability for results as it is difficult to realize. Given the considerable variation in the needs, capacities, and contexts of schools, it is striking—though not surprising—that for the most part, resource allocation patterns in K–12 education are relatively uniform (Nakib, 1995; Lankford & Wyckoff, 1995; Monk et al., 1997; Miles & Darling-Hammond, 1998). The uniformity

of leaders' responses to these varied needs may simply signal a safe course, the most easily defended set of decisions in a context of competition for scarce resources. Beneath the surface of this course of action, however, conflicting expectations, tensions, and barriers may be impeding leaders' ability to think more creatively about how to organize and allocate limited resources and act strategically. These barriers exist at all levels of the education policy system.

In such a situation, leaders might wish for definitive understanding about the impact of particular investments on student learning, yet the state of knowledge here is very incomplete (National Research Council, 1999). The highly contextual nature of schools, the variation in which any particular improvement strategy is implemented, the motivational conditions that are present, and the need to adapt strategies to fit specific circumstances all interact with the resources brought to bear on learning improvement goals. Consequently, leaders act in response to particular needs and learning challenges with limited evidence of performance.

Key Allocation Issues in Relation to Learning Improvement

In such a context, and despite differences among states, districts, and schools, educational leaders face some common problems of practice with respect to resource allocation. Four of these are central to leadership that focuses on learning:

1. *Targeting achievement gaps.* Making resource-related decisions that seek to close achievement gaps and have good prospects for enhancing the equity of educational outcomes.
2. *Organizing schools and districts to enable the alignment of resources with learning improvement agendas.* Structuring time, the nature and assignment of staff, and programs so that they collectively emphasize learning improvement priorities.
3. *Managing the politics of learning-focused leadership.* Mediating the political pressures associated with decision making about resources that emphasize learning improvement and with the redistribution of authority to act.
4. *Developing the human capital of the school or district.* Providing supports, incentives, and opportunities for learning

that build motivation and expertise, thereby fostering higher performance.

These problems of practice are intertwined and cannot be addressed in isolation. Rather, they are part of leaders' daily work that is shaped by the varying contexts and conditions of practice and by the capacity of leaders to develop multiple strategies that work in a mutually reinforcing way. For example, the success of a decision to adopt an inquiry-based science curriculum for grades 4–6 will also depend on how time has been organized and allocated for science, how supports for teachers to develop new instructional strategies are provided, and how accountability pressures to improve learning simultaneously in other subject areas are addressed. Thus each problem of practice we describe interacts with and is influenced by leadership action aimed at addressing other areas of concern.

Targeting achievement gaps. Most prominent among these problems of practice, particularly for urban leaders, is the need to address the stark disparities in achievement among different groups of students. Driven in part by current federal policies, if not by the state and local district, the commitment to reduce these disparities is an inescapable goal for district and school leaders. The key leadership act is to “put the money where the rhetoric is,” by making achievement gaps basic reference points for all or most resource-related decisions. This is a tall order, especially given the lack of certainty about which course of action might make the greatest headway toward this goal.

The effort to target achievement gaps can mean various things in the actual resource allocation process, and it may look different at the state, district, or school level. School leaders, for example, may need to examine how well school programs prevent students from systematically “falling through the cracks,” given the school’s attention to learning issues, curriculum, or articulation between grades. Districts may need to wrestle with how equitably they allocate teaching staff to schools. States will need to ponder what they can do, beyond setting standards and accountability mechanisms, to keep these mechanisms from becoming punitive and to provide real assistance to districts and schools that struggle to reduce achievement gaps. In all these instances, the crux of the challenge is not the education system’s lack of concern but its failure to free up resources that significantly and meaningfully address student learning needs—especially for students of color, students from disadvantaged backgrounds, or students for whom English is not their first language. At a

minimum, the leadership act consists of evolving and pursuing a theory of action that prioritizes this work and lays out specific activities that explicitly address achievement gaps (e.g., Resnick & Glennan, 2002).

Organizing schools and districts to enable the alignment of resources with learning improvement agendas. How schools and classrooms are designed, how teachers are organized into teams and subject departments, how schedules are set up, how contractual safeguards are created to ensure favorable working conditions—all these and more affect leaders' ability to allocate resources in service of a learning improvement agenda. Many have advocated for a fundamental rethinking of how resources are allocated and who controls the available resources (Odden, 2001). Achieving this change will require changing the policy systems and structures that encourage, support, and maintain existing patterns of behavior that prevent emerging educational goals from being realized (Schlechty, 1997).

Once again, the relative uniformity in approach to resource allocation is a tip-off that current practices may not be taking full account of the varied learning needs of particular schools, classrooms, or students. The technical, formula-based approach to allocating human resources (four-fifths of the operating budget in most school districts) is accompanied by a history of limited discretion for decision making on the part of school leaders to configure resources in different ways. The leadership act is to imagine alternatives to current practice and create the organizational conditions that enable resources to be used in more flexible and purposeful ways.

Managing the politics of learning-focused leadership. Directing or redirecting resources to learning improvement priorities is likely to challenge existing interests at all levels of the educational system. As has been well documented, the internal political pressure of schools and education systems affects leadership activities (Raywid et al., 2003). These political pressures are, in part, generated by competing demands (Hill & Celio, 1998) stemming from a variety of sources, including actors both inside and outside the education system. They include federal and state policymakers, school boards and superintendents, education associations, community leaders and stakeholders, teachers and instructional staff, as well as parents and the media. Each of these stakeholders has different expectations for the education system and different views as to how resources should be allocated and utilized.

Developing the human capital of schools and districts. One of the major allocation tasks district and school leaders assume concerns *human* resources. As an ever-growing body of research indicates, highly qualified teachers are a hugely important factor affecting student achievement in the classroom (Levin & Quinn, 2003; Rice, 2003). The quality of school leadership, as well, is becoming important in this era of rethinking what schools do and how they do it. Given that at least three quarters of fiscal resources are spent on people, leaders cannot help but pay attention to the ways in which human resources are brought to bear on equitable access to knowledge for students, teachers, and leaders. Here, three interrelated puzzles confront leaders at multiple levels of the system:

- *Human resources can be, and generally need to be, developed.* They are not fixed commodities (as many allocation models seem to assume)—but rather, through a variety of capacity-enhancing measures, can be nurtured so that staff attain and exercise a greater level of expertise. This is especially true of leadership resources and instructional expertise, both of which require careful nurturing over time if schools and districts wish to increase their focus on learning improvement.
- *Decisions about human resources often raise questions about reallocation, as well as development,* because human resources are frequently not well aligned with learning improvement priorities to begin with. As such, reallocation decisions are likely to generate significant resistance, which means that leaders pursuing learning improvement agendas need to be astute managers of politics, as well as knowledgeable about the learning issues at hand.
- *Human resources “vote with their feet”*—that is, while they may be assigned to a position, staff may not stay there (or even accept the assignment to begin with) if attention is not paid to the conditions that motivate professional people to commit to pursuing particular improvement goals in particular settings.

So the educational leaders who take a learning improvement agenda seriously are inevitably involved in imagining ways to develop and deploy the human resources at their disposal.

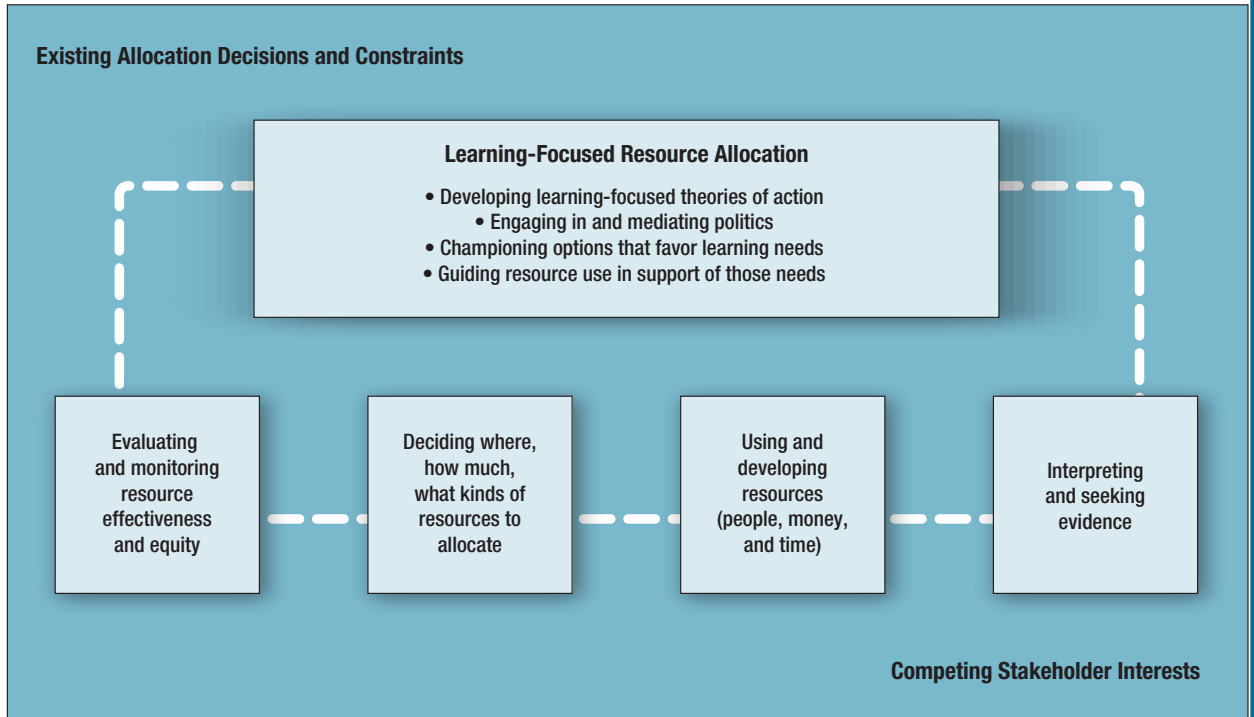
The Process of Learning-Focused Resource Allocation

Addressing these kinds of allocation issues is the central business of learning-focused leadership. Absent a commitment to learning improvement that is more than rhetorical, leaders at each level of the educational system are likely to engage in a process in which leaders' visions of possibility interact with stakeholder interests and an array of constraints—chief among them, the existing allocations of funds, people, and time to various purposes within the system. At a minimum, such a process is simply a matter of horse-trading among competing interests, within the boundaries set by allocation parameters (available funding for the year, filled and open position slots in each school and across a district, projected enrollment increases or decreases, etc.). Beyond the minimum, the process may be directed by some guiding principles—or competition among guiding principles. But the process is always essentially political.

In contrast, learning-focused leadership aspires to a more robust allocation process that affords more ways, in principle, for resources to be directed to learning improvement priorities. Schematically represented in Figure 1, this process adds to the equation a theory of action (hopefully a coherent one) shared by leaders or members of leadership teams (or even broad-based coalitions pursuing learning improvement goals, as at the state level) that prioritizes specific improvement goals and articulates a set of strategic actions that make the achievement of these goals more likely. The process also places greater emphasis on evidence: By seeking information about learning needs, current programs, emerging conditions, and the effects of prior investments, leaders seek more fully informed ways of developing and appraising allocation options. The process is still political in that it seeks to balance a number of competing interests, but it introduces into the debate a potentially powerful set of considerations that otherwise might not get adequate voice. The leaders' initial act is to structure and guide such a process so that the focus on learning, strategies for addressing it, and the evidence that can inform decisions are fully heard.

Within this process, leaders do various things to keep the process focused on learning improvement: They engage multiple perspectives and competing interests, especially those that place value on learning improvement; they manage the process of deliberation so that learning priorities remain central to decision making; they champion particular allocation outcomes that keep

Figure 1. Learning-Focused Resource Allocation



equitable learning goals in view; they develop ways of guiding the use of resources, once allocated; and they seek and interpret evidence about the uses and effects of resource allocation and use. If feedback loops and a culture supporting data-informed decision making are well established (see Knapp, Copland, Swinnerton, & Monpas-Huber, 2006), a kind of allocation “cycle” may appear, in which the equity and effectiveness of resource allocations are continuously assessed, relevant resources for furthering improvement priorities are identified and acquired (within constraints and resource parameters), and these resources are distributed according to need. In practice, the process is likely to be far messier than this image may convey, but one can still discern the central role that learning improvement priorities, strategies, and evidence play.

Contexts and Constraints on Leadership Actions

The process just described is highly constrained by its context. Both the financial conditions of the school, district, or state and the political conditions in the respective local and state communities are central features of this context. These constraints include the budget practices of the school district and the

prior year's financial decisions; the fixed or unanticipatable costs associated with the physical plant (e.g., building maintenance) or human resources (e.g., health care benefits); the demand for accountability—both for specific funds and for system performance; the stipulation of labor agreements and the relationship between the school district and the education association; as well as the conflicting expectations of parents and the general public. Each of these constrains leadership actions and precludes certain resource-related decisions that might be desirable, given a learning-focused approach to leadership.

Existing budgets and the budgetary cycle. Clearly, existing budgets and the budget process constrain the range of options leaders may consider in any given year, as in the past. The budget process is an interrelated series of activities that involves the state, district, and school levels. At the state level, for example, education-related expenses are viewed alongside other public goods, including transportation, social services, and law enforcement. Thus, state-level leaders are constrained by the needs of other public services just as they are by the revenues available. The state's budget assumptions, in turn, set parameters for district-level budgetary decisions. How many students attend school in a particular district and how much the state allocates per pupil determine how the district constructs its budget. Acknowledging fixed costs, such as insurance and building maintenance, the district then typically allocates positions and some discretionary funds to schools, thereby heavily influencing the resources (e.g., dollars, numbers of staff) available to leaders in schools. Regardless of whether the district designs its budgets centrally or involves schools using a school-based budgeting model, the resources at the school level are typically a reflection of what is available, not what may be necessary to adequately support the learning needs of students.

Fixed or unanticipatable costs. Adding to this situation, the fixed costs of education also constrain state, district, and school-level leaders. Expenses for building maintenance, telecommunications, utilities, supplies, legal support, health insurance, and other employee benefits must be considered and funded with the same resources used for teaching and learning activities. The revenue available to spend on classroom teachers, for example, is somewhat dependent on the cost of health insurance and other benefits that the district must account for. These costs constrain leadership activities because they must be funded regardless of how they relate to teaching and learning.

Conditions in the policy environment. Costs are only one kind of constraint that affects resource allocation. Various policies regulate what is available for leaders to allocate, how those resources can be used, and how their use must be accounted for. For example, leaders at all levels of the education system are constrained by the policies governing how public education and school districts, in particular, can generate revenues. The multiple layers of government and the overlapping authorities for making decisions about education may send mixed messages about what funds (e.g., categorical funds) can be used for, which may or may not coincide with local learning improvement priorities. Finally, a focus on accountability directs leaders' attention to investments that appear to line up most closely with how their schools will be judged.

Collective bargaining agreements. Contractual agreements with local education associations also constrain leaders' ability to make resource decisions—particularly as they relate to evaluating, allocating, and managing human resources. Contracts frequently specify the amount of time that teachers can be expected to teach and participate in meetings or out-of-classroom professional learning activities. Assignment practices give senior teachers priority when choosing assignments, which often limits choices available for novice teachers. Additionally, teachers' associations wield considerable political influence at state, local, and national levels.

Each of these conditions not only limits leaders' range of options or discretion in the process of allocating resources but also contributes to multiple (and often conflicting) expectations among parents and the public about what schools should provide in terms of resources and how they should provide them. The upshot is complicated political territory in which learning-focused leaders must proceed artfully to pursue strategic courses of action that take these many factors into account.

Common Practices and Emerging Strategies

Activities under way at the state, district, and school levels represent current thinking about how to leverage people, money, and time to pursue learning improvement goals. Relatively little research establishes the effectiveness or feasibility of these strategies, but some scholarship helps to understand what these strategies are trying to accomplish and what their prospects for success might be. Table 1 offers an overview of emerging (re)allocation strategies, which purport in some way to bring the resources of people, money, and time more closely in line with improvement agendas.

Although scholarship has often examined the policy systems and strategies for generating and distributing revenues from states to individual districts, less research has been done to investigate the ways in which resources are configured at the level of the individual school. Generally speaking, we know that teachers are not evenly distributed across schools, and it is often the case that schools serving children in poverty have lower teacher retention, less experienced staff, and higher percentages of teachers who lack the preparation and expertise necessary for their teaching assignment (Ingersoll, 2002; Boyd, Lankford, Loeb, & Wyckoff, 2000). Leaders at state, district, and school levels are grappling with ways to reduce these inequities so that all students have the teachers they need and all schools are productive learning environments that support high-quality teachers and teaching. Some of the emerging strategies include alterations to teacher compensation systems that reward performance or provide differential pay for particular knowledge and skills (Milanowski, 2003). Other ideas include reorganizing time in the school day for teachers to collaborate and participate in professional learning and reallocating staffing to accomplish particular improvement strategies, such as lowering class size in targeted grades or subject areas (Odden & Archibald, 2001). Each of these emerging strategies involves making decisions about how money, time and people are allocated.

In our discussion that follows, we elaborate on these strategies, along with further discussion of the dynamics underlying the allocation of people, money, and time. We also further discuss the creation of incentives, which constitutes a special case of resource allocation or reallocation.

Table 1. Range of Efforts to (Re)Allocate Resources and Create Incentives That Support Learning Improvement Agendas

	Allocating people and expertise	Allocating money	Allocating time
State action	<ul style="list-style-type: none"> • Policies regulating the credentialing of teachers, administrators, and renewal of credentials 	<ul style="list-style-type: none"> • Adjusting state funding formulas (base funding) • Altering state salary schedules, guidelines • Allocating funds for particular categories of staff • Allocating funds to support staffing for hard-to-staff schools, special learning needs • Allocating funds to professional development for teachers or leaders • Changing rules governing resource use (e.g., to make categorical funding flexible) 	<ul style="list-style-type: none"> • Specifying days set-aside for professional development, etc.
District action	<ul style="list-style-type: none"> • Reallocating staff to schools to address inequities • Proactive recruiting and incentives • Adjusting hiring practices • Support and incentives for accomplished teachers (e.g., NBCTs) • Leadership development policies and incentives • Greater induction support • Partnerships with training institutions 	<ul style="list-style-type: none"> • Alternative funds allocation, weighted student formulas, school-based funding • Alternative compensation systems and incentives, merit/performance pay, group-based rewards, knowledge/skills-based pay • Nongovernmental revenue (partnerships, philanthropy, etc.) • Investment in leadership development 	<ul style="list-style-type: none"> • Requirements governing time for professional development • Requirements governing instructional time • Supporting additional time for staff • Supporting additional time for struggling students (e.g., through tutoring, extended day)
School	<ul style="list-style-type: none"> • Greater school discretion in hiring • Expanded systems of novice teacher support • Greater use of accomplished teachers (e.g., NBCTs) • Redirecting teachers' work with special needs • School-community partnerships as a source of expertise 	<ul style="list-style-type: none"> • School-based budget management and authority • Investing in specialized staff • School-community partnerships as a revenue source 	<ul style="list-style-type: none"> • Restructuring the school day (e.g., block scheduling, team time blocks) • Restructuring staff time for professional development, planning • Expanding the school day and year (after school, summer)

Allocation of People and Expertise

Policies and practices at multiple levels of the educational system determine who has responsibility and authority for ensuring that human capital is developed and distributed in equitable and effective ways across districts and inside a district's schools. First, state policies that regulate teacher and principal credentialing affect the pool of available educators, as do institutions of higher education that engage in the professional preparation of educators. Though the dynamics of the labor market lie largely beyond the reach of educational leaders at the local level, their efforts can enrich the pool and bring some new individuals to fill open positions. Given the pool of possible candidates—and given the existing staff resources at one time—strategies for bringing human resources to bear on learning improvement priorities concentrate on

- Hiring staff.
- Distributing staff to schools.
- Attracting and retaining qualified teachers.
- Matching staff skills with students' learning needs.

Hiring staff. Districts serve as the primary hiring agent, subject to state requirements regarding certification and locally bargained agreements regarding hiring processes. A typical urban district hiring process consists of a candidate's formal application, a paper screening done by a human resource department, a district human resource interview, and a district referral for an interview at a school for a specific school placement. Three factors contribute to the failure of districts to consistently hire high-quality teachers: late vacancy notification requirements, teacher association transfer requirements, and late budget timetables and inadequate forecasting (Levin & Quinn, 2003). In a study of 510 Pennsylvania school districts, only one-quarter of the districts advertised outside of the state, and 17 percent advertised only within the district (Strauss et al., 2000). In this same study, one-third of districts reported that they filled full-time openings with district substitute teachers or part-time teachers already known to district officials. The authors also note that “most districts spend less than two hours with candidates prior to hiring them” (Strauss et al., 2000, p. 412). The nature of hiring practices underscores possible entry points for improving the ways that new human resources are secured—in particular, by reconsidering the operation of central office

human resource departments, the way hiring is implicated in collective bargaining agreements, and the expanded role of schools in the hiring process.

While district hiring practices often limit the ability of the school principal to screen and select teachers that possess the particular skills needed at the school, there is a trend toward allowing greater school-level decision-making discretion with respect to hiring staff. Some urban districts, like Chicago and Seattle, have adopted hiring processes that allow applicants to apply directly to the school, giving more control to principals and site hiring teams to select candidates. This is particularly advantageous for hard-to-staff schools that suffer from chronic teacher turnover. Though a decentralized hiring system provides an opportunity to have closer interactions with potential hires, it assumes that the school has (1) accurately assessed the specific learning needs of the students in the school and the school's existing capacity to meet those needs, (2) determined the types of skills needed to be a successful teacher in the specific subject area(s) and context of the unfilled position, and (3) developed a hiring process that determines not only if candidates possess those skills but also if they can be successful using them given the school context. The move toward the greater authority and responsibility of principals for hiring and retaining staff has important implications for the ways school administrators are prepared for their positions and, once in them, helped to learn how to do them well.

Distributing teachers to schools. Most districts distribute teaching resources (as well as many other staff resources, like counselors, reading specialists, instructional coaches) through a set of procedures based primarily on student enrollment, student-teacher ratios, and the number of students with special learning needs. This process provides a base allocation of teachers and other instructional and support staff to individual schools. Under this base teacher allocation model, schools are typically budgeted for *average*, not actual, teacher salaries (Rubenstein & Miller, 2005). As various studies point out, this traditional method yields intradistrict spending disparities. Research conducted by Steifel, Rubenstein, & Berne (1998) reports low variations in base funding across schools in each city, but it also finds lower teacher salaries in high-poverty schools, sometimes offset by more staff relative to pupils. The low salaries are indicative of the number of inexperienced teachers generally found in most high-poverty schools. Further still, a study looking at dollars spent per school in four urban districts showed that averaging teacher costs

drives significant amounts of money out of schools serving poorer students and toward better-off schools (Roza & Hill, 2004). Findings such as these have prompted leaders to seek alternative allocation strategies that help to level the playing field for more affected schools, such as through weighted student funding and school-based funding (see the discussion that follows concerning the allocation of money).

Attracting and retaining qualified teachers. A more specific picture of who enters teaching and what affects their longevity in teaching positions is being developed by research, which helps pinpoint the kinds of schools and districts most likely to be successful in recruiting and retaining teachers, as well as the impact of school working conditions and compensation—not to mention teacher preparation, induction, and mentoring strategies—on teacher recruitment and retention (summarized in Allen, 2005). This line of research also helps to determine the efficacy of particular recruitment and retention strategies and policies in bringing new teachers into the profession, including specifically targeted populations.

Working conditions and compensation, in particular, are likely to have particular relevance to questions of resource (re)allocation. The research provides some support for the expected conclusion that schools with greater administrative support and teacher autonomy have lower attrition (Allen, 2005). Similarly, increased compensation tends to increase the rate of teacher retention, but that result depends on factors such as teachers' gender, level of experience, and job satisfaction (Allen, 2005). As for the recruitment of new teachers, various strategies are being tried, among them early recruitment efforts and loan forgiveness programs, but these are not well studied yet (Allen, 2005). Leadership at several levels has a central role in fashioning and implementing these strategies, and yet we know less than we should about the way leadership tools such as compensation and incentives help leaders manage the human resource of the school's teaching workforce. Leadership and the organization of the school clearly have a lot to do with how likely staff members are to stay in their positions (Ingersoll, 2001).

Matching teachers' skills with student learning needs. Even if school leaders are able to attract qualified teachers to their schools, whether through traditional or site-based hiring systems, they are still left with the challenge of configuring staff and supporting and retaining teachers in ways that will maximize student learning. This challenge is particularly evident with novice

teachers, who need additional support and assistance as they develop their craft in the first few years of teaching. There, a “support gap” typically exists between novice teachers in low-income schools as compared to their colleagues in more affluent schools (Johnson et al., 2004). Novice teachers in low-income schools are less likely to come to their positions through timely hiring, less likely to have experienced mentors, and less likely to have access to a curriculum that is aligned with state standards (Johnson et al., 2004). Other recent research regarding more accomplished teachers—those who have earned certification from the National Board for Professional Teaching Standards—also highlights disparities in the distribution of this teaching resource among high- and low-poverty schools: In five of six states studied, poor, minority, and low-performing students were less likely to have access to teachers with National Board Certification (Humphrey, Koppich, & Hough, 2005). Ensuring that all teachers are adequately prepared, matched to their teaching assignment, and supported in their work is an enormous challenge.

Related to this notion of matching teacher skills with student needs is the challenge of ensuring that proper strategies and support are provided to populations with special learning needs, particularly students who qualify for special education or who are English language learners. Landry (1999), among others, asserts that through a series of intensive instructional interventions, nearly 75 percent of struggling readers identified in kindergarten and first grade can be brought up to grade level without the need for placement in special education. These struggling students are often placed in special education services based on their categorization as having mild or moderate learning disabilities. However, the kind of early assistance that is needed is dependent upon the ability of school support staff to work closely and collaboratively with classroom teachers to design and implement appropriate strategies for meeting the identified learning needs.

Allocating and nurturing the appropriate human resources to address the learning needs of student populations such as these have huge implications for school leaders in particular. First of all, they have the responsibility to foster a more collaborative school culture and infuse relevant professional development opportunities to support it. Furthermore, they often have an important role in recruiting and assigning teachers or other staff to work with youngsters with special learning needs and to do so equitably, with attention to the match between teachers’ strengths and students learning needs. As for English

language learners (ELL), that match is not always close, as demonstrated by research in California that found systematic inequity in ELL students' access to instructional resources, such as fully certified teachers and appropriate instructional materials (Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003). This research identified resources that are necessary for ELL students to achieve high academic standards, among them, well-qualified teachers whose primary assignment is to work with the ELL students, rigorous curriculum and courses for all ELL students and affirmative counseling to take those courses, and professional development for all teachers, with a specific focus on effective strategies for teaching English throughout the curriculum. Each of these aspects of high-quality instruction implies the judicious allocation of human and other resources by district and school leaders, beginning with providing ELL students with capable teachers. Ensuring that all teachers are adequately prepared, matched to their teaching assignment, and supported in their work is an enormous leadership challenge. It is a key aspect of managing human resources effectively, efficiently, and equitably.

Allocation of Money

Another responsibility that districts and school leaders have is allocating money from federal, state, and local revenue streams. These revenue streams include base allocations from the state, categorical funds from both federal and state sources, and revenues from nongovernmental sources. Leaders at several levels of the system face important challenges in securing and allocating these sources of money and in directing them toward learning improvement priorities. Emerging practices highlight leaders' efforts to

- Address inequities in base funding allocations.
- Decentralize spending authority to the schools.
- Make productive and flexible use of categorical funding sources.
- Secure nongovernmental funding and direct it coherently to learning improvement priorities.

Addressing inequities in base funding allocation. The amount of base funding is traditionally determined by state finance formulas and provided to each district. The funding is primarily driven by student enrollment and the staff-to-student ratios that set the number of teachers, administrators, and

other staff units. A perennial debate about base funding centers on whether existing practices are equitable and adequate as funding is distributed from states to districts and then to schools. Rubenstein & Miller (2005), along with many other researchers and analysts, note the importance of achieving “vertical equity”—ensuring that schools serving students with different levels of needs receive differentially appropriate levels of resources. While the equity and adequacy of state funding formulas are not a focus of this paper, a state’s particular funding mechanisms and policies do affect leaders at both district and school levels and set the stage for local leaders’ efforts to allocate resources in an equitable fashion.

In one emerging strategy for addressing issues of funding inequities among schools within the same district, a weighted student funding formula, sometimes called student-based budgeting, is established to provide differential levels of resources according to the individual needs of students. This approach differs from the typical practice of using standardized staff-to-student ratios based simply on total student enrollment. Recent examples of districts adopting this method have shown evidence of progress toward greater resource equity among schools within districts. For example, an analysis of the shift to student-based budgeting within the Houston Independent Schools and Cincinnati Public Schools, using a newly developed tool called the student-weighted index, revealed that staff-based budgeting results in varying degrees of inequitable resource allocation, while the implementation of student-based budgeting yielded significant equity gains in both districts (Miles & Roza, 2005).

Decentralizing spending authority. A related strategy gaining prominence, called school-based funding, deemphasizes the centralization of budgeting and financial administration at the district level and instead relocates it at the school level, empowering individual sites to make funding decisions to affect student learning. Budgeting practices in the United Kingdom and Australia allow for certain percentages of “flow through” funding that pass from the central government directly to schools and offer a potentially viable model for emerging school-based allocation practices in the United States (Odden, 2001). The former example allows for 85 percent of funds to flow directly to the school site, whereas the latter allows for 87 percent. In Edmonton, Alberta, Canada, 90 percent of school budgets are under site control (Committee for Economic Development, 2004). In the United States at present, there are at least five urban

districts that give schools control over their budgets: Cincinnati, Houston, Milwaukee, Sacramento, and Seattle. Such models pose a substantial challenge to current resource allocation practices at state, district, and school levels, with implication for leaders and leadership at all levels.

Inherent in both alternative strategies described above is the shift toward decentralized spending authority, which necessitates closer attention to resource matters by school-level leaders. The assumption is that school leaders and staff are in a better position to decide the appropriate way to maximize spending and utilize human resources to achieve more equitable learning environments for their students. Decentralization also implies that principals and other school leaders have the skills and supports they need to make informed decisions regarding matters of budget and finance. Once again, this kind of budgetary discretion implies a new role for principals and also for district leaders, who shift from making allocation decisions to supporting—as well as monitoring—the decision making of others. These role changes have particular implications for how leaders are prepared initially and how, once in administrative or other leadership roles, their professional knowledge is developed to enable them to handle increasing school-level authority and responsibility for budgets.

Making productive, flexible use of categorical funding for learning improvement. In addition to base funding allocations, categorical funds comprise a significant source of revenue and, hence, offer leaders at the district and school levels an important additional source of funds to allocate and manage. This funding supports compensatory programs targeted for specific students, for example, economically and educationally disadvantaged students. For the most part, though, these funds are passed down from federal and state levels, through districts and into schools. Among those programs most widely known are those supporting remedial services for educationally disadvantaged youngsters (Title I), special education services, and English as a Second Language (ESL) programs. These special funds come with strict guidelines and accountability measures that involve a great deal of documentation and compliance.

An ongoing criticism of categorical funding is its lack of flexibility to be used as districts and schools determine the most appropriate and effective allocations—in this sense, the rules accompanying categorical funding often constrain the leaders' allocation options considerably. Categorical funding,

in many ways, serves as a means for federal or state institutions to exert influence on schools, which sometimes results in less flexibility or authority at the district or school level. In California, since 1980, unrestricted funding declined on average by 8 percent, while categorical funding increased by 165 percent (Timar, 2004). Yet this kind of funding is both a constraint and an opportunity for leaders at multiple levels. By one argument, the present system of categorical finance lacks a coherent policy focus and systematic structure, targeting an overwhelming collection of educational inadequacies (Timar, 2004). This perspective begs for an overall rethinking of categorical programs, especially by policymakers at state and federal levels, that shifts them from an externally directed school finance system with fixed, multiple objectives to one more concentrated and embedded in a local context and more responsive and accountable to local needs and performance goals. In response to these critiques, recent provisions in some categorical programs (Title 1 is an example) allow a more simplified process for leaders to access, use, and account for education dollars and greater flexibility in how those dollars are used. One job of educational leaders at both district and school levels is to become familiar with these and other provisions designed to liberate the funding of education from the bureaucracies and roadblocks that typically burden it (Walter, 2001).

Securing nongovernmental funding and directing it coherently to learning improvement priorities. Nongovernmental funding—from school-based fundraising (often through the Parent Teacher Association [PTA]), school-business partnerships, not-for-profit organizations, and educational philanthropies—presents educational leaders with important opportunities but also potential constraints. Increasingly, district and school leaders are looking toward nongovernmental sources of revenue to provide extra learning opportunities for students and staff. This possibility expands the resource allocation challenge to include the entrepreneurial work of generating discretionary resources that can be used to address specific needs. Given chronic shortages of funding and other key resources, leaders are under some pressure to become more entrepreneurial and proactive in seeking sources of funding.

This activity affects how principals or district leaders spend their time and, as with other aspects of resource allocation, calls into question whether or not they have the skills needed to engage in this type of role. The reliance on external, usually temporary (e.g., one to three years) funding from dif-

ferent nongovernmental sources, each with its own agenda, also raises questions about the leaders' ability to create a coherent focus on local learning improvement priorities and sustain it over the long term. In some districts in pursuit of a coherent focus on teaching and learning, district or school leaders may forego opportunities to bring in significant new funding sources—even turning down millions of dollars—because these sources would distract from the learning improvement priorities to which the district has made long-term commitments (McLaughlin & Talbert, 2002).

Nongovernmental funding also raises fundamental issues of equity, given the differential access of schools to such sources. For example, of the various types of support PTAs provide to schools, fundraising is probably the most well known to parents, teachers, and school leaders. Whether through formal fundraising vendors or a school auction or bake sale, PTAs help raise additional funding for schools that can be used at their own discretion. Some local PTAs are able to raise enough money to hire a full-time certificated position for their school, whereas others raise barely enough to break even on their fundraising efforts. This poses for district leaders yet another issue of equity among schools, given the wide variations in the capacities of individual school communities to raise additional funding.

School-business partnerships and philanthropic aid to schools pose a related set of allocation issues for leaders. These sources can offer funding (as well as other kinds of resources, such as expertise) that can contribute in various ways to a learning improvement agenda. Some partnerships involve the provision of monetary funding or teaching supplies and equipment by a business where schools reciprocate by giving public credit for their donations. Others, particularly at the high school level, entail well-defined purposes that are established between the school and business, where business professionals engage in the curriculum through actual teaching or other course support. Some partnerships are able to provide apprenticeships that serve as on-the-job training. Philanthropies provide yet another source of resources for districts and schools. Some of this funding is tied to support particular groups of students in need or to fund specific reform initiatives, such as the transformation of comprehensive high schools or improved instruction in math and science. At other times, the efforts of philanthropies are focused on systemic improvements such as leadership development, strategic planning, or community empowerment.

While nongovernmental sources of revenue are often viewed as being more flexible and honed to specific local needs, they also present their own set of reporting requirements and political expectations that must be addressed and managed by educational leaders. In combination with each other or with existing school and district initiatives, they raise the specter of incoherence, as potentially competing priorities vie for leaders' time and attention and those who work directly with students receive potentially mixed messages.

Allocation of Time

A third resource for leaders to allocate is time—for instruction, planning, professional learning activities, and other important functions of the school. Here, school, district, and state leaders encounter important opportunities for restructuring the time available for these purposes and for helping participants develop new images for how to use the time, once available. Emerging leadership practices focus on at least these areas:

- Rearranging time for instruction and other interactions with students.
- Making time for collaboration and professional learning related to learning improvement agendas.
- Expanding time available for learning improvement activities.
- Guiding the use of restructured time toward a learning improvement agenda.

Rearranging time for instruction and other interactions with students.

In recent years, district and school leaders have been experimenting extensively with reform strategies that reorganize the amount and arrangement of time in the school day available to teachers for instruction, and they have encouraged teachers to utilize the new time structures in ways that will improve student learning. Examples of strategies to reallocate or refocus instructional time include block scheduling, literacy blocks, team teaching, and interdisciplinary teaching (Walter, 2001). In the context of high school transformation initiatives, these experiments have often taken the goal of “personalizing” the education of adolescents, through time blocks (e.g., advisories) in which faculty who have long-standing relationships with students can interact with students outside of the normal structure of subject-based classroom work in conjunc-

tion with a change in teacher loads and assignments that make this kind of interaction possible (Darling-Hammond, 1997).

Making time for collaboration and professional learning related to learning improvement agendas. Parallel to the reorganization of instructional time are efforts to rearrange the time for classroom teachers, educational assistants, and other school staff to work collaboratively with one another on planning or engaging in various activities that support professional learning. While the bulk of their time in schools is spent working directly with students, educators need time to pursue skill development and other kinds of professional learning opportunities that will allow them to do a better job of instructing students and meeting the diverse needs in the classroom. And there is generally some down time in the day or week that could be put to this purpose—though it takes conscious effort to overcome barriers to using time this way, as in one large city system in which the collective bargaining contract guarantees middle school teachers one lunch period and two prep periods in an eight-period day, while discouraging the use of these prep periods for professional development (Center for the Study of Teaching and Policy, 2001)

To use time differently, such as for professional development purposes, leaders need to know how time (and money) is currently spent on these functions—a challenge that turns out to be more difficult than it may appear. Currently, the absence of uniform reporting requirements inhibit comparisons across districts or schools regarding how professional development time is used or even what money is spent on it (Miles et al., 2005; Killeen, Monk, & Plecki, 2002; Odden et al., 2002). Time devoted to professional learning is often provided through a combination of state and local resources, which often fund extra days in the school calendar for professional development activities. Additionally, individual teachers make decisions about how to spend time on professional development that is required for them to meet certification renewal requirements. The most common practice for meeting these certification renewal requirements is for teachers to acquire “clock hours” that are paid for by the teacher and spent on activities of their own choosing. These activities are not necessarily linked to professional development that teachers actually need to improve in the specific context of their classroom. Furthermore, many teachers do not consider the professional development they do receive from their district or school to be valuable or relevant (Farkas,

Johnson, & Duffet, 2003). The mismatch may occur for many reasons, but chief among them is that “these activities are frequently short in duration, unrelated to individual classrooms, and unconnected with the work of colleagues” (Neville & Robinson, 2003, p. 8). What may be of far greater use—and is most difficult to allocate and account for—are forms of “job-embedded” professional development that happen in real time across the school day, as teachers interact individually or in groups with peers, instructional coaches, teacher leaders, or knowledgeable administrators (Knapp, Swanson, & McCaffery, 2003).

To make time for job-embedded professional work, problem solving, and other matters of joint concern to school staff, many schools are attempting to build time into the regular school day for shared work, collaboration, and staff development. Through block scheduling and creative student programming, schools can create several-hour blocks to be used to accommodate these professional development activities (Miles & Darling-Hammond, 1998). The assumption here is that this established time is used for staff-guided learning and decision making related to the specific instructional needs of the students and teachers in the school, not for training determined by someone else or for the transmission of administrative directives.

Expanding time available for learning improvement activities. While the school day and year are of fixed length, time for instructional purposes or other forms of support for learning (including professional learning) is not limited to the official school day or year. Three other time-related resource allocation strategies expand the amount of time for students who fall short of meeting academic standards: tutoring, an extended day, and summer school programs. First, tutoring programs combine an expanded time for instructional support with a new personnel resource (often volunteers from the community, ranging from senior citizens, community business members, and parents, and sometimes school staff members). Tutoring programs require scheduling that allows for the instructional interactions to happen, whether during the normal school day, before or after school, or otherwise. Leaders face a particular challenge in making sure that this allocation of time and people pays off: For example, they may need to ensure that appropriate structures are in place, such as coordination of the program by a certified teacher, one-to-one tutoring sessions, trained tutors that use specific strategies that

cover subject matter aligned with classroom curriculum, and tutoring that is consistent and ongoing (Wasik & Slavin, 1993).

Initiating extended day and summer school programs, however, is a more common action taken by schools and districts to allocate more time to instruction for certain categories of student. A number of research studies point to the effectiveness of after-school programs to improve student's academic and behavioral outcomes (Vandell, Pierce, & Dadisman, 2005; Mahoney, Stattin, & Magnusson, 2001). Summer school programs have long been a solution for students that have fallen behind in their academic development. A meta-analysis shows that the average student in summer school programs outperforms the 56 to 60 percent of similar students not participating in summer school programs. While research on the effectiveness of summer school programs on student achievement as a whole has been mixed, the general research consensus seems to indicate that summer school has the potential to positively affect at-risk students if implemented in a high-quality manner (Cooper, Charlton, Valentine, & Muhlenbruck, 2000). A further benefit can be arranged, as in one district that is experimenting with the use of summer school as a laboratory for the intensive professional development of teaching staff at the same time that it serves students who need additional help (Swinnerton, 2006).

Guiding the use of time toward a learning improvement agenda. Attention to the restructuring of time comes with a caution, noted by some scholars who remind us that time is always in short supply in teaching, a profession in which there is ultimately no limit on the time that could be put to a task that is, in some sense, never finished (Hargreaves, 1997). In such instances, efforts to change the way teachers use time in relation to learning improvement priorities often carry with them an implication that teachers should invest ever more time in an expanding set of responsibilities; a parallel situation confronts educational leaders (see Portin, Schneider, DeArmond, & Gundlach, 2003 for a discussion of the expansion in school leaders' responsibilities). Given that tendency, "the line between continuous improvement and interminable improvement is a fine one, and school change efforts often fall afoul of it" (Hargreaves, 1997, p. 79).

But that caution notwithstanding, a more basic issue concerning the allocation of time confronts school, district, and state leaders. While all these efforts create a structure of time that *can* be used for purposes related to

learning improvement agenda, there is no guarantee that the time *will* be used accordingly. This expectation creates a related and fundamental leadership challenge, concerned with guiding and directing how time is used and with motivating participants to use time in these ways. Leaders have various tools for accomplishing this end, among them, specifying tasks to be accomplished in newly created time blocks; assigning and supporting joint work by teacher teams, like collaborative curriculum planning (e.g., see the case of Parkside Alternative Middle School in Copland & Knapp, 2006); developing professional learning activities, often with the assistance of outside groups, to make use of time blocks (Marsh et al., 2005); and modeling the use of time or otherwise working to build a professional culture that supports learning-focused time use (see Knapp & Associates, 2003, pp. 24–28).

In supporting productive use of restructured time, mandates have limited usefulness. Here, leadership that *shows*, rather than tells, staff what to do with their time, and then supports and reinforces those activities on an ongoing basis, is more likely to further learning improvement goals. And part of the motivational puzzle may be the allocation of other resources, such as incentives, that reinforce educators' will to undertake particular tasks and use their time well.

The Role of Incentives in Developing Human Resources

While many kinds of incentives can be imagined, educational leaders wishing to pursue a learning improvement agenda that treats equity as a central goal face questions about incentives—as well as disincentives—that affect who does what in relation to the agenda. Here, as elsewhere in the realm of resource reallocation, leaders are concerned with using resources to develop other resources, in this case the human resources of the school or district. A special case involves the creation of incentives that encourage skilled teachers to work in hard-to-staff schools, teach subject areas that are difficult to fill, and provide rewards for improvement. A parallel set of incentives may be developed for administrators, and there are some instances of this in play. Incentives represent a further element in the leaders' repertoire for directing resources more specifically at learning improvement priorities, but they raise difficult questions about their immediate and “collateral” effects.

In recent years, much of the research regarding incentives has revolved around the principles of merit pay and performance-based pay. According to

Goldhaber et al. (2005), economic theory suggests that merit pay could be a successful way to improve schools by attracting more able people to teaching and motivating them to be more productive. Furthermore, current standardized pay schedules may deprive the managers of public schools of the authority to adjust an individual teacher's pay to reflect both teacher performance and market realities (Ballou & Podgursky, 2001), though there are relatively few instances of public schools that have tried such pay systems to see if they would work. On the other hand, merit pay can be problematic because it can cause teachers to focus on only a limited number of tasks that are connected to rewards as opposed to a more comprehensive focus (Murnane & Cohen, 1986). Under such arrangements, a sense of competitiveness can arise among staff members that can erode collegiality between staff members. This possibility has caused some leaders to experiment with group-based rewards for improved performance, such as the strategy used in North Carolina's ABC program, on the grounds that such arrangements could mitigate the threat to collegiality potentially posed by individual reward systems. But such an approach may do little to address what some see as the most significant concern of many teachers regarding merit-pay systems: that judgments about compensation will be based on subjective factors and conditions that are outside of their control (Goorian, 2000). However, the increased focus on developing value-added models for assessing the growth in student learning provides another opportunity to consider merit-based strategies based on a more "objective" appraisal system that avoid some of the major concerns with this type of incentive-based approach to compensation.

Relatively few public school systems have implemented merit-based salary schedules. Private, nonsectarian schools are at least twice as likely as public schools to use something they call "merit pay" (Ballou & Podgursky, 2001). Denver is currently in the process of implementing a version of a merit-pay system called the Professional Compensation System for Teachers, or ProComp.

In contrast to merit- and performance-based pay incentives is an alternative teacher compensation strategy known as knowledge-and-skills-based pay that attempts to avoid some of the pitfalls of merit pay. Instead, skill-based pay rewards teachers for attaining and being able to use knowledge and skills valued by a school, district, or state given a predetermined standard (Milanowski, 2003). In addition, this approach allows for the maintenance of

current salary schedules while directly relating teacher pay to the acquisition and utilization of desired skills, be it oriented toward curriculum and content, leadership, or other related skills vital to high-quality instructional practice in the classroom. An important component of this compensation method involves how the determination of the set of skill standards is made. To date, this determination has been made through collaborative efforts between district and school level leaders, teachers' associations, and school boards. As in the Denver example, developing this type of alternative compensation system requires time, primarily to establish trust among all affected groups and to develop clarity about the standards to be used in making determinations about the level of knowledge and skills.

Other types of incentives are also being considered as a means to attract teachers to hard-to-staff, high-poverty, and/or low-performing schools. Strategies such as loan forgiveness programs, additional compensation, and housing assistance are all part of current policy debates regarding ways to improve the likelihood that all students have access to high-quality teachers and teaching. But here, astute school and district leaders are acutely aware that non-monetary incentives are also important to teachers in shaping their job satisfaction. Few teachers believe that increased compensation is the one best solution. Rather, teachers tend to rate other school-based factors, such as well-behaved students, strong collaborative working environments, and supportive administrators, just as or more important than increased compensation (Farkas et al., 2000). Whether or not these non-monetary incentives and supports are present inside schools is primarily a function of the quality of district and school level leadership and of specific leadership actions—even actions that bring non-monetary resources (like restructured time and expertise) to bear on school working conditions.

Unanswered Questions and Enduring Dilemmas

The emerging practices described offer glimpses into how the exercise of learning-focused leadership can reshape the challenges and constraints of resource allocation. Yet issues related to resource allocation, particularly the development and allocation of human resources, encompass a wide terrain and raise a range of questions that need to be pursued, both by those who are experimenting with new approaches and strategies and by those who wish to study them.

Important Unanswered Questions

There are important unanswered questions related to the four key allocation issues, noted earlier in the report, that confront leaders who take seriously the improvement of learning for all students. These questions concern (1) the ways in which leaders use resource allocation as a tool for closing the achievement gap; (2) how leaders mediate and negotiate the political pressures associated with resource decisions and their distribution—as well as how they acquire the authority to make these decisions; (3) how the structuring of school time, staffing, and programs aligns with what students and teachers need to improve learning; and (4) how leaders develop human capital by providing supports and incentives that foster higher performance.

Questions about leaders' use of resources to close the achievement gap.

If the purpose of leadership, as we conceive of it, is to create powerful and equitable learning opportunities for students and professionals, then questions regarding the equity and adequacy of resources emerge. Examples of these questions are:

1. How, if at all, do particular resource strategies and decisions in a given state, district, or school setting reflect the leaders' commitment to closing the achievement gap? In what ways are these strategies and decisions shaped by (a) the leaders' understanding of equity and resource adequacy, and (b) a coherent theory of action that connects resources with student learning?

2. How do policies, rules, structures, and leadership roles enable (or frustrate) leaders' attempts to distribute resources in ways that encourage greater equity in learning outcomes? To align money, people, and time with learning improvement priorities?
3. In what valid and effective ways can leaders use student performance as a means for evaluating the efficiency and adequacy of resource (re)allocation practices and demonstrate whether or not the achievement gap is being closed?
4. What other benchmarks besides student performance can inform leaders or other audiences at school, district, and state levels about the progress being made using resource strategies to close the achievement gap?

Questions about leaders' efforts to mediate and negotiate the political pressures associated with resource-related decisions. While leaders may have the authority to make resource decisions, they may not have the opportunity to do so because of the political pressures associated with existing resource structures and the assumptions about investment priorities. These pressures pose challenges to leaders at all levels of the education system and prompt these questions:

5. What are the political pressures associated with resource-related decisions—especially where these decisions concern the reallocation of existing resources from one use to another to address learning priorities? How do leaders identify, negotiate, or navigate these pressures?
6. Given the complexities of governance structures and the occasional conflicting expectations for education, how do leaders at any given level of the education system craft a coherent approach to allocating resources? What does a coherent approach look like across levels of the system?
7. What (re)allocation strategies and incentives bring high-quality staff to hard-to-staff schools, without unmanageable repercussions elsewhere in the system (e.g., political backlash, unmet needs elsewhere in the system)?

8. How, if at all, do or can leaders at different levels of the system (state, district, school) coordinate their actions, decisions, or strategies to accommodate the political realities of resource allocation? Are there approaches to coordination that are particularly effective, given the intention to focus on learning improvement?

Questions about leaders' efforts to organize the structure of schools in ways that improve learning. As our discussion makes clear, the configuration of people, money, and time creates structures that reflect resource-related decisions and the structure that guides educational opportunities. Important questions exist about leaders' ability to track the translation of resources into actual use.

9. At the school level especially, how do leaders organize the time of staff and students to align with instructional priorities and address inequities?
10. In what ways do leaders make significant and regular time blocks available to staff for planning and professional development as part of their daily work across a school year? And how do they encourage or support the productive use of these time blocks to pursue learning improvement priorities?
11. How do leaders at varying levels of the education system figure out whether resources are being used appropriately and what configurations of resources contribute the most to learning improvement goals? What evidence shapes their understanding of effectiveness?

Questions about leaders' efforts to provide supports and create incentives that enhance the quality and quantity of human capital. Ensuring powerful and equitable learning throughout a school system hinges on leaders' capacity to distribute human capital in ways that support a learning agenda and place well-qualified teachers in schools and classrooms where they are most needed. Furthermore, strategies concerning human capital are also especially concerned with the *development* of human capital—that is, with the means to improve the quality of staff expertise throughout the sys-

tem. Central to this task is the development of the leaders' own expertise, alongside that of teachers and other staff.

12. How do leaders provide ongoing support and creative incentives that encourage higher levels of performance? What strategies, methods, or configurations do leaders find particularly effective in meeting learning improvement challenges?
13. How do district leaders ensure that students in struggling schools receive an equitable share of human resources to support learning?
14. What do state-local systems do to guide, support, and enable the professional learning of leaders with regard to resource (re)allocation strategies and the effective provision of incentives?
15. How are school leaders, in particular, helped to learn what they need to know about resource (re)allocation, especially in settings where they are granted more resources and increased discretion over allocation decisions?

Enduring Dilemmas

These questions present significant challenges for the field and for leaders in education, and answers will not be easy to develop. In pursuing these questions, educators and scholars will need to keep in mind some fundamental dilemmas or tensions that are ever-present in the process of allocating resources. Threaded through these dilemmas are ideologies that become part of the context in which leaders approach questions about resources and, hence, are a central feature of the politics of resource allocation.

More resources or more efficient uses of existing resources? Resources are always scarce (economists often assert that scarcity is part of the definition of a “resource”). In such a context, it is natural for leaders who wish to mount a learning improvement initiative to seek additional resources rather than reallocating what they already have. Doing so is fully justified if the activities that depend on those resources cost more or require greater expertise than is currently available. But the search for more resources begs questions about how efficiently current resources are being used, as one segment of the public will

routinely remind educators. Given the frequent difficulties in showing a clear pay-off for investment, these interests balk at anything that would increase the cost of public education, while a counter faction in the public will always press for greater outlays. This ideological see-saw is a constant feature of the resource allocation process.

Stay the course or continue to experiment? Resource allocation is often thought of as an “investment” of dollars, time, and people in the enterprise of public education, and like many investments the presumed “pay-off” is unlikely to show up in the near term. It takes years to educate a child, and it takes years to create and sustain solid educational programs, no less a powerful learning improvement initiative, especially in large complex school systems. Such a situation breeds impatience, and the impulse to try something new is ever-present in deliberations about the prospective uses of resources. That impulse is also fueled by the external expectation of instant results, a fact of life in contemporary politics of public education. Yet the counter position can also be argued, and often is: We need to stay the course and give our current way of investing dollars time to show its potential. This voice for continuity of investment is more likely to come from within the public education system than without, and it may also reflect simple inertia or desire not to disturb an existing status quo. Whatever the reason, the timeline of resource decision making about resources (which occurs at least annually in the state, district, or school budgeting cycle) is likely to afford repeated opportunities to change course before the evidence is in. With each opportunity, the two sides of this endless debate are likely to express themselves.

Act on available evidence or develop better evidence? Resource allocation takes place in the midst of considerable uncertainty. As noted above, the timeline for decisions moves forward inexorably, and often there is not sufficient good data on the questions at hand to make a judgment that is well informed (see Knapp, Copland, Swinnerton, & Monpas-Huber, 2006, for a fuller discussion of what data-informed leadership entails). This fact prompts the impulse to ask for more and better data and to resist premature decision making until more convincing evidence is available. But the call for more and better data belies several counter tendencies (besides the public’s impatience for instant results, noted above): the lack of a fully developed knowledge base about the connections between investments and results, no matter what the data; the cost of creating better data sources, which diverts resources from the original

purposes; and the inherent ambiguity of much data, necessitating interpretation (Honig & Coburn, 2005). For these reasons, it is hard for decision makers to make the uncertainty about resource allocation go away, even though at some cost the uncertainty can be reduced.

These enduring dilemmas do not make the earlier questions pointless or the aspiration to make resources do a better job of supporting learning improvement an endless series of shots in the dark. There is much that we do understand about the dynamics and consequences of resource allocation in support of learning improvement, and attaining greater clarity about what educational leaders are trying to do can only help. The goal is not final, irrefutable answers to the difficult questions nor the elimination of enduring dilemmas that will never go away. The goal is a continued search for an ever-greater understanding and the pursuit of well-conceived strategies that show the promise of supporting powerful, equitable education for all students.

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