Improving Educator Workforce Development and Local Staffing Practices
Reflecting research and policy emerging in many states and federal initiatives, the PESB's goals, strategies, initiatives, and policies reflect a significant shift toward creating a comprehensive educator development system that supports a continuum of educator development that begins with recruitment and extends career-long.

Previous	Now / Future
"Firehose" approach to supply	Pipeline
Candidate interest drives enrollment	State / local need drives enrollment
Student teachers are "guests in schools"	Field placement benefits student learning / veteran teachers
Supervising interns = veteran release time	Mentoring = co-teaching, integration, skilled support, impact on students
Beginning teachers marks end of preparation	Career-long, support continuum of professional growth; opportunities and access to retooling

The PESB has implemented numerous measures that have greatly strengthened the continuum in areas in which it holds authority and responsibility, including: more rigorous, clinically-based preservice preparation program and certification standards; greater access to a broader range of preparation options and providers; second tier certification rooted in professional practice and requiring student based evidence; pathways and financial incentives for veteran teachers to strengthen their content knowledge and credentials; and support and incentives for individuals from underrepresented populations to complete college and pursue a career in teaching math, science or other shortage areas. What is discussed in recent literature and reflects the experience of the PESB, however, is that the transformation required to truly establish a high-quality educator development system will require a broader statewide approach, including state-specific analysis and strategies for addressing the policy and practice barriers that prevent fundamental change in local district practices with regard to staffing and workforce development. For example, the PESB and others desire growth and expansion of residency-model preparation programs. Recruiting into these type of programs, however, requires district clarity and commitment related to the number of teaching positions they will have available. One barrier to this is that Washington school districts recruit and hire very late, due to uncertainty about enrollment and apportionment; what one Washington superintendent recently called "the tyranny of the immediate".

As another example, because the state lacks predictive models for districts to be able to project their future workforce needs, taking into account fluctuations in economic situation, it is difficult to match up recruitment, preservice production, and distribution strategies with an unclear picture of district demand. The PESB has emerging data tools, and initiatives underway to create strong partnerships between preparation programs and school

districts, and PESB staff will highlight some of these. But more fundamental data and systems approach is clearly implied.

Behind this cover are excerpts from several reports that describe the current status and needed changes in educator workforce development at the local and state level. One report excerpt's authorship included Marge Plecki from University of Washington's Center for Study of Teaching and Policy, who will also be present to discuss this issue and assist the Board's in engaging in dialogue around joint support for change.

Few districts take advantage of state policy that allows them to offer paid teaching positions during alternative route training.

State Policy

Both traditional and alternative programs' clinical experience must be "sufficiently extensive and intensive for candidates to demonstrate competence in the professional roles for which they are preparing."

However, there is no clear minimum amount of field experience required before candidates can take a paid teaching position.

Existing Programs

But few districts currently provide employment during alternative route training, in part because they do not forecast workforce needs well enough or early enough to utilize alternative route candidates. As a result, many alternative route participants **complete their clinical internships without pay** for a full school year.

51% of 2008 TNTP Teaching Fellows reported that being able to work while earning their teaching certificate was the **single most attractive benefit** of joining their program.

Sources: WAC 181-78A, and review of alternative-route programs approved by the Professional Education Standards Board (PESB) for 2009-2010. Some programs allow students to exit after only a half-year internship, pending demonstration of meeting all other program requirements.

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Excerpt from: Allocating Resources and Creating Incentives to Improve Teaching and Learning
A Research Report in collaboration with The Wallace Foundation by Margaret L. Plecki, Christopher R. Alejano, Michael S. Knapp, and Chad Lochmiller; University of Washington, Center for Study of Teaching and Policy

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

	[illegible]	[illegible]	[illegible]
State action	• Policies regulating the credentialing of teachers, administrators, and renewal of credentials	• 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)	• Specifying days set-aside for professional development, etc.
District action	• 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	• 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	• 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	• 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	• School-based budget management and authority • Investing in specialized staff • School-community partnerships as a revenue source	• 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.