

Rethinking District Professional Development Spending to Support School Improvement: Lessons from Comparative Spending Analysis

Karen Hawley Milesⁱ
karenhmiles@cs.com

October 2002
Draft of Chapter for
American Education Finance Association 2003 Yearbook
School Finance and Teacher Quality: Exploring the Connections.
Editors: David Monk and Margaret Plecki

Standards-based reform has entered a new phase that puts professional development of teachers at the center of the discussion. Even as many schools improve instruction to meet higher standards, concern is rising over how to respond when school performance does not get better. One reform response focuses on changing the system so that parents can leave poorly performing schools. But, unless there are large numbers of high-performing schools near these students, unsatisfied parents will have nowhere to go. So, the next step becomes finding ways to increase the number of high-quality schools, by creating new schools or improving existing schools – and quickly. A large body of research tells us what good schools look like, but we know much less about what strategies and resources it will take to create and sustain large numbers of high-performing schools. Without this understanding, parents and reformers will be stuck demanding improvement without knowing whether schools or districts have the resources they need or whether they are making the changes necessary for improvement.

School districts across the country already invest significant sums of money each year in professional development to improve schools and teacher practice. The five districts studied here spent between 2.2 to 3.7 percent of total operating expenditures and \$8.6 to \$123 million dollars. But no district actively managed all of these dollars together and none had a district level strategy to help focus and integrate professional development spending around improving student performance. To understand what districts will need to spend, they must first know what professional development they are currently providing, how much this costs and which efforts improve school and teacher performance. With this information, they can organize more deliberately around a strategy for improving schools.

This chapter explores the lessons for research and practice that come out of comparing professional development spending across five urban districts. The findings presented here

use an unusually intensive data collection effort and a collaboratively created standard for defining and coding professional development spending that can be replicated over time or in other districts. These five districts collected this spending information as part of their work to develop a district strategy for professional development. Because each district helped to collect and make sense of it, the data are uniquely detailed and have the potential to be more accurate than data gathered from secondary sources. Spending has been coded in ways that come out of the districts' own questions about how they spend their dollars. The framework for defining professional development cost elements was developed in collaboration with researchers from the Consortium for Policy Research in Education (CPRE) who were also working to develop and promote a replicable way to measure and describe professional development spending (Odden, Archibald, Fermanich, & Gallagher, 2002). The following two sections describe the methods and findings of this joint effort.

Approach and Methodology

The first step in supporting each district in creating its professional development strategy involved inventorying, describing and quantifying their current efforts. With the complete set of activities identified the districts then asked three questions. First, how closely do the targets and purposes of these professional development activities align with our district priorities? Second, is the district offering "high quality" professional development opportunities that match research based principles of effective efforts? Finally, what can we learn from comparing our district to others?

Comparing professional development spending across districts is a difficult undertaking with little research available (Corcoran, 1995; Hertert, 1997; Killeen, Monk, & Plecki, 2000). Three main factors explain this dearth of information. First, districts often do

not report all of their professional development spending in one place, looking only at certain departments or funding streams. Second, definitions of what to count as “professional development” vary significantly. Third, since professional development expenditures are not considered direct classroom instruction, some districts try to disguise them in other categories in order to protect them in tight budget times.

Responsibility for professional development spending and services is often spread across numerous district departments with multiple funding streams (Miles, 1999,2000). Each of these funding sources has different targets and reporting requirements. Frequently, even district administrators do not know how much they spend on professional development. One of the districts studied here reported professional development spending of only \$460,000. When they included all funding sources and departments, they discovered they actually spent \$8.9 million (Miles & Hornbeck, 2000). Similarly, a 1981 study of three urban districts found that actual professional development spending exceeded the districts’ own estimates by a factor of 50 (Moore & Hyde, 1981).

Varying definitions of what to include as professional development expenditures also make comparison difficult. Most studies include activities such as workshops, conferences and the “staff development” department. The more comprehensive studies include a wider range of investments aimed at building teacher capacity such as mentoring, teacher sabbaticals, student-free teacher preparation time during the school day, and salary scale increases resulting from additional training credits (Corcoran, 1995; Hertert, 1997; Miles et al., 1999; Miller et al., 1994). Studies vary on whether and how they include spending on intervention to support low-performing schools and school reform designs. The variations

cause dramatic differences in spending estimates and make interpreting findings across studies complicated, at best.

District reluctance to clearly report professional development spending presents a final measurement challenge. In tight budget times, board members and other community members often insist that only “indirect” or non-classroom costs be cut. In one district studied, the teacher-mentoring program was cut three times and then reinstated over a decade. Once the budget office stopped reporting this spending separately it remained stable. This tendency reinforces the importance of having common definitions and measurement. If the need for higher levels of spending to build teaching capacity were widely understood, then districts might view this spending as an indication of their emphasis on teaching quality- instead of as a target for budget cuts.

This study contributes to the available research by:

- Clearly defining the components of professional development cost by using the framework developed in collaboration with CPRE (Odden et al., 2002)
- Creating a coding scheme to describe the target, purpose, organization and funding of the professional development activities, and
- Collecting data directly from the district using a multi-step interview and data analysis process.
- Collecting detailed school level data on professional development spending in two districts

Defining the Components of Cost

To create a standard definition for what to include as “professional development” and how to calculate its costs, CPRE researchers (Odden et al., 2002) collaborated with Jennifer King Rice of the Finance Project. The framework includes six core elements of professional development spending: 1) teacher time; 2) training and coaching; 3) administration; 4)

materials, equipment and facilities; 5) travel and transportation; and 6) tuition and conference fees.

The teacher time element of the framework provides a standard way to include district and school investments to provide teachers with time to participate in professional development. This is important because many districts pay teachers for extra work days or hours scheduled for professional development. Since teacher compensation increases to pay for this time, it can represent considerable investment. The framework includes the cost of time added to teachers' work calendar when it is explicitly designated for professional development by contract or district policy. In addition, the framework includes the salaries of teachers on "sabbatical" if the district offers such time-off to pursue career development.

These calculations do not include the cost of teacher "planning time" during the school day. In most schools, teachers have regularly scheduled blocks of time, often known as "planning periods", which are free from instruction. Teachers use this time for a variety of activities including planning and preparing for lessons, working together with other teachers to improve or plan instruction, and sometimes for participating in professional development activities. When this time is consistently scheduled for professional development or collaborative school improvement work, the cost of covering teachers' classes during this time might be considered a professional development expense. But, capturing the use of this time requires in-depth school-level analysis that is not included here.ⁱⁱ

The framework includes the direct cost of training and coaching of all types, from the salaries of district trainers and consultant fees to the salary of full-time coaches at the school sites. It also attempts to capture the district's indirect cost. When staff members spend 20 percent or more of their time supporting or supervising professional development activities,

the cost of this staff time is included. The cost of materials, equipment, and facilities is also included, as is the cost of travel to off-site professional development activities. Finally, the framework includes tuition and conference fees paid for teachers who obtain professional development on their own when the district reimburses teachers for it. It does not include the teacher's out of pocket expenses for training. More detailed information on the cost structure, the research supporting it and methods of calculation is available in Odden et al. (Odden, et al 2002, Miles et al 2002).

Coding for Target, Purpose and Delivery Strategy

The cost structure framework ensures that the same elements of cost are compared across districts. But insuring inclusion of a full and common set of professional development activities requires clarity around the “targets,” “purposes” and “delivery strategies” of the professional development investments.

Districts and schools balance professional development between two “targets”: building individual skills and improving instructional capacity school-wide or across certain content or program areas. The first category – individual professional development – refers to investments aimed at meeting the individual career needs of teachers or principals. This professional development is often triggered by the career stage or status of the individual, such as a beginning teacher or a teacher with an unsatisfactory rating. The teacher's or principal's individual initiative or need to gain specific skills, such as adding a special education certification or enhancing classroom management skills, can also drive the training.

Professional development aimed at the second target category – schools – builds individual capacity, but *in the context of a school level or instructional program effort*. These activities aim at teams of teachers, all teachers in schools, or at building knowledge district

wide in program or subject areas. For example, school-wide comprehensive school reform models would fit here as would any school-based coaching in content areas. District-wide initiatives to build capacity in certain subjects or skills such as required training to build science or student assessment skills would be included here. But, subject training available to teachers on a voluntary basis would be coded as individually targeted spending.

Table 1 below lists five categories of “purpose” for professional development aimed at individuals and four for training aimed at schools. Once the purposes have been coded, additional coding tags provide further detail. For example, professional development aimed at continuing education would also be coded as to topic such as literacy, technology or math. Similarly, activities coded as “support to special student populations” would be tagged by the type of student such as bilingual or disabled and by the topic if appropriate.

<Boxed Table starts here>

The categorizing of targets and purposes of professional development spending can help a district prioritize and focus its investment when analyzed further by subgroup. For example, the district could look to see how much it invested in professional development for certain categories of schools such as low performing schools, elementary schools or schools with high poverty populations.

The final major coding step involved classifying activities into eight distinct delivery strategy categories. The term “delivery strategy” describes a particular way of organizing staff, consultants and professional development content to improve individual or school capacity. This step helps ensure inclusion of all forms of professional development and later enables evaluation of various forms of providing professional development. For example, most districts would include spending organized as a “training academy,” but they might not

include spending on “comprehensive school reform designs.” A comprehensive design would address school improvement by using a prescribed process and set of materials that address improved instruction across all grades in a school. These may include “off the shelf” whole school models such as “Success for All” or “Co-Nect” or locally developed models.

“Lead Teachers” are another category not always included as a professional development expense. This label refers to teachers who have a formal title of “Lead Teacher” and work within a school to lead improvement efforts, such as a “Literacy Lead” or “Team Leader” teacher. These teachers are paid an additional stipend and have defined responsibilities related to providing school level coaching or professional development. Stipends for lead teachers not providing professional development or coaching would not be included here. A complete description of each delivery strategy category can be found in the Appendix.

Collecting the Data

The data collection method for this five-district study helped ensure that all professional development investments would be considered and that sufficient detail on the target, purpose and organization of the investment could be collected. The analysis began with the entire district budget. This included general funds, as well as budgets from all other public and private sources of funding for the district. Researchers identified all line items that could contain expenses for “instructional support” defined as all district strategies, including professional development, used to support high quality instruction in the district. Line items such as transportation costs, that were clearly unrelated to instructional improvement, were eliminated. Dollars allocated to school-level budgets were also excluded from this analysis.

District-level interviews clarified which expenditures were related to instructional and school support and allowed coding of department spending into seven categories: professional development, accountability, curriculum development and support, special program monitoring and compliance, information systems, district student services and community outreach. Interviews included department heads and fund managers in departments such as quality improvement, career in teaching, administration, curriculum & assessment, magnet, vocational education, accountability, professional development, Title I, Title II, and special education.

At this point, the focus narrowed to coding those expenditures within instructional and school support that had been defined as professional development using the framework and definitions described above. Perhaps the most challenging effort involved identifying the district staff time involved in professional development. Many district staff members devote a significant portion of their time to supervising or providing professional development activities. Interviewers asked each staff person to estimate the time spent on professional development-related activities.

Including School Level Professional Development Spending

District level spending on professional development represents only a piece of the total cost of improving school performance. School level data on spending complete this picture. But, as for the district data, school budgets are not formatted to allow easy identification of these dollars. In fact, school level interviews showed that school principals often do not quantify their total spending or record the use of dollars, time and staff over they year. In two districts, Midwest and Mega, school case studies add to the district data

presented here (Miles et al, *in Press*, Fermanich, 2002). These data were collected through principal and teacher interviews as well as analysis of school level budgets.

Findings

The five sample districts were at varying stages of reform efforts centered around building teaching capacity. Each used this research as part of their efforts to integrate and focus their work. Southwest, Northeast and Mega were at the early stages of their efforts to rethink the district role in supporting school improvement, while Midwest was three years into its strategy. Southeast was also beginning its restructuring effort, but had recently received an infusion of new State and Federal support which it put directly into whole school reform support for schools. The sample districts also vary in their level of decentralization with Midwest and Mega putting a greater portion of decisions and dollars to the school level than the other three districts. As Table 2 shows, the districts range in size from 50,000 to 500,000 students. They all have large proportions of poor and minority students.

<Insert Table 2 Here>

Five sets of lessons come out of comparing professional development spending across these districts. First, districts invested significant, but widely varying resources in professional development. No overarching strategy for professional development linked the efforts of the numerous departments managing these resources. Second, district spending to provide teacher time for professional development was the single largest investment in some districts, but investment levels varied widely. No district had strategies for holding schools or teachers accountable for effective use of professional development time. Third, most districts aimed the majority of professional development at building school-level capacity, but they use different, usually unplanned combinations of delivery strategies. Fourth, some schools

supplement district resources with significant portions of their own dollars to support professional development, but these resources are often difficult to integrate with district support. Finally, districts rethinking their use of professional development spending can make dramatic changes that focus resources around a strategy for school improvement in short period of time. The following paragraphs describe these findings in more detail:

1. Districts invested significant, but widely varying resources in professional development. No overarching strategy for professional development linked the efforts of the numerous departments that managed these resources.

The five districts examined here spent, on average, about three percent of the districts' total operating budgets and \$3,600 per teacher. These estimates are in line with other research (Hertert, 1997, Killeen, Monk and Plecki 2000). But, the methodology used here allows more confident comparison of the differences across districts. As Table 3 shows, the levels of investment ranged significantly, from just over two percent of total operating expenditures in Southwest and Midwest to nearly four percent in Northeast and Mega.

<Insert Table 3 Here>

These investment levels are far larger than any professional development expenditures the districts actively managed. For example, in Southwest, the district's professional development department spent \$2 million, only one-fifth of the total professional development investments. The remaining \$9 million of expenditures was managed by others and was not part of an overall strategy for professional development. The most common departments involved in professional development included curriculum development, Title I, special education, and instructional technology. In each district, the strategies and resources of these departments were not linked at the beginning of this work. In addition to departmentally organized professional development, both Midwest and Southeast had

organized “intervention” support for low-performing schools that included significant professional development from staff and outside providers. In three sample districts, outside providers including non-profit organizations and a university, administered a large portion of the professional development budget. As was true across district departments, the outside providers had their own approaches to professional development and no district held outside providers accountable for demonstrating improved student performance or changes in teaching practice.

Contributing to the difficulty of creating an overarching strategy, All five districts relied heavily on non-local revenue sources to fund their professional development programs. As Table 3 below shows, on average, nearly half of their revenue for professional development programming, 49 percent, came from non-local sources or private, state and federal funds.ⁱⁱⁱ At one third of total revenue, federal funds provided the largest source of outside funding. Title I was the single largest source of federal funding, followed by National Science Foundation, Individuals with Disabilities Education Act, and Title II Eisenhower Math and Science program grants.

<Insert Table 4 Here>

Private sources, such as grants from foundations and corporations, accounted for an average of eight percent of revenues, but 31 percent of total revenues in Northeast. The next closest district, Southeast received only three percent of its revenue from private sources. At the time of this study, Northeast had just received significant private funding to implement a locally developed “whole school improvement” model in about a quarter of its schools. State support for professional development (that did not come from the general fund) also varied across these districts, ranging from only two percent in Southeast to 12 percent in Midwest.

2. District spending to provide teacher time for professional development varied widely in size and composition.

Districts pay for teacher stipends or substitutes to allow participation in professional development. Some districts also add days or hours to the teacher calendar to provide time for teams to work together. Northeast and Mega, were the only two districts that designated such professional development time in its teacher contract. Northeast paid teachers for two full days for professional development plus an additional 18 hours scheduled over the year at each school. This adds nearly \$7 million to the total spending and represents 35 percent of Northeast’s total. Spending on 8 days of contractual time represented half of the Mega’s professional development investment. Including the cost of professional development days in spending totals is necessary because providing this time reflects an important district investment that is often not explicitly quantified or managed. But it is so large that it distorts comparisons. As Table 4 shows, when this spending is removed from the estimates, Northeast’s spending levels drops to 2.4 percent, looking more similar to Southwest and Midwest. Mega drops to 1.9 percent, the lowest level of any sample district. Because this adjustment changes spending level estimates so significantly and because districts and policymakers address this investment in teacher time separately, cross-district comparisons need to explicitly account for this investment by stating expenditure levels with and without this cost.

<Insert Table 5 Here>

Districts devoted dramatically different portions of their dollars in providing teacher time for professional development ranging from four percent and 52% of all professional development spending. Table 5 shows that even when dollars for contracted professional

development days are removed, spending on stipends and substitutes differs greatly from 4% to 21%. The districts that provided professional development days, Mega and Northeast, also paid teachers more in substitutes and stipends. Northeast invested 13 percent of district dollars in stipends and substitutes for teachers to participate in professional development and the highest per teacher amount at \$520 per teacher. Southwest devoted the highest percent of its professional development dollars to teacher stipends and substitutes.

Meanwhile, Southeast and Midwest spent only \$150 and \$100 per teacher respectively at the district level to pay teachers for time to participate in additional professional development. While these numbers may indicate a low level of investment in teacher time, it would be dangerous to use these numbers alone to measure a district's commitment to providing teacher professional development time. Three kinds of information help complete the diagnosis.

<Insert Table 6 Here>

First, school level spending must be added. Especially in a decentralized district, such as Midwest, schools may use discretionary funds to pay teacher stipends and find substitutes to create professional development time. Second, school districts and schools can restructure the use of existing teacher time to create instruction-free time in ways that do not add cost (Miles & Hornbeck, 2000). Third, teacher compensation and job structure might create monetary incentives to devote additional time to professional development. For example, Midwest invests more than other districts to pay annual stipends to Lead Teachers who facilitate and prepare for teacher development. Midwest also provides a \$5,000 incentive for teachers to obtain certification from the National Board for Professional Teaching Standards.

While this is not a direct payment for time, it provides incentive to devote time to professional development. At the other end of the spectrum, Southwest's teacher salaries are so low, that the district uses every opportunity for stipends to raise teacher income.

The process of quantifying the cost of teacher professional development days or hours spurred these districts to think more strategically about how to hold schools accountable for making more effective use of this time and support them in doing so. It also highlighted situations where extra time exists that could be used for improving school or teacher capacity, but where the district has no way of doing so. For example, in Southeast, the teacher contract includes 10 teacher work days beyond the student calendar. However, these days are not explicitly designated for use as professional development and no one is responsible for effective use of this time.

3. Most districts targeted the majority of professional development toward school-level capacity building but no overarching strategy guides this support.

Four out of the five districts aimed the majority of their district spending at improving school-level capacity in some way and invested a much smaller portion in developing individual capacity apart from school or district programs and initiatives. Table 6 shows that Midwest and Northeast both invested 1.8 percent of their operating budgets and about \$2,000 per teacher in school-targeted professional development. Southeast invested more heavily in professional development aimed at schools, spending \$4,000 per teacher and 2.5 percent of budget, in contrast to Southwest, which on the low end, spent one percent and \$970 per teacher. Interpreting these differences requires further detail in two areas. First, assessing the effectiveness of these investments or even accurately describing them demands more precision about which schools and teachers received resources for what purpose. The coding

scheme presented here facilitates this analysis. Second, as discussed below, districts and policymakers need to know how this professional development is organized and delivered.

<Insert Table 7 Here>

Midwest provides a powerful example of how delving more deeply into which schools receive support can help target resources. Over 70% of all of Midwest’s professional development resources are allocated to the school level, but the distribution of school level resources is not planned across schools and some schools have access to only a few sources of support. This means that total professional development resources for each school and teacher vary significantly. The chart below highlights a dramatic spread in the total professional development resources available to schools. It shows that the lowest elementary school receives about \$545 per teacher in district support while the highest school has over \$8,000 per teacher in district resources for professional development and school improvement.

Despite the wide variance, Midwest’s strategy lay behind some of the differences. The district rates schools at four levels depending on school performance and improvement over time, with the lowest level labeled “redesign” and the highest achieving schools called “achieving”. The district organized to provide redesign and intervention schools with extra support and infusion of dollars along with intense supervision. The average numbers show that schools in the lowest performing category of “Redesign” received an average of \$3,500 without including the school’s discretionary spending. Schools in the next to bottom category “intervention schools receive slightly less at \$2,750 per teacher. However, Midwest discovered a deviation in the pattern with the schools in the “improvement” category. These schools received less per teacher on average than the schools in the highest “achievement” category.

<Insert Chart 1 Here>

Even though school level allocations followed a logical pattern, resources within performance categories varied significantly. Chart 1 above shows the available resources per teacher for each “accountability” level along with the average for that level (the lightest bar at the end of each category). The analysis shows that there is the greatest variation in resource levels in the bottom two performance categories. Some schools in the intervention category receive less than 25% of what the schools at the highest end receive. Since the district holds all schools to the same performance standards, leaders felt strongly that schools should have access to similar resources for transforming instructional practice.

Creating a powerful strategy also requires choosing how to organize the delivery of each kind of professional development. This analysis shows that districts use common delivery strategies for professional development, but in very different mixes. Table 8 shows professional development expenditures by district in terms of the percent of total expenditures by delivery strategy. The mix of strategies employed by a district reflects a

<Insert Table 8 Here>

blend of history politics and, to some degree, a deliberate strategy. The “range” calculated for each of the strategies highlights those strategies that represented very significant commitments in one or more of the districts studied. Comprehensive school reform designs, school-based instructional facilitators, school-based lead teachers and teacher mentors each represent more than one quarter of all professional development in at least one district and are not employed or used little in other districts. Often the difference between districts can be driven by heavy investment in one strategy. For example, in Southeast, if the dollars supporting “school-based instructional facilitators” were removed from spending estimates,

Southeast would drop to the same per teacher level as Midwest and Northeast. In the same way, if the resources devoted to Southwest's mentor program were removed, Southwest's investment in individual teachers would drop below the level of other districts.

4. Schools supplement district resources with significant, but highly variable portions of their own dollars.

Two districts, Mega and Midwest invested the time in collecting school level professional development data to complete their picture of district professional development spending. Because these districts both decentralized most of their Federal dollars to the school level and had deliberate policies that allowed more school level flexibility, this window on school activities was especially important. In each district, school level spending on professional development varied widely across the sample schools. In Mega, spending in elementary schools ranged from a low of \$885 per teacher to a maximum of more than \$9,000 per teacher, a factor of more than 10. Average per teacher spending was just under \$3,800. Variation among the high schools was somewhat less, ranging from \$2,354 to \$7,541 per teacher, with average spending of \$4,294 per teacher. Schools that had access to categorical funding sources such as Title I or State Chapter I dollars did spend more. However, higher spending schools also seem to dedicate more of their general fund dollars to professional development as well (Miles et. Al 2002, Archibald and Gallagher, forthcoming; Fermanich, forthcoming and Gallagher, forthcoming).

Even schools that fund at lower levels devote significant resources to professional development. At \$900 per teacher, a typical elementary school with 40 teachers would have \$36,000 to spend on professional development, an amount nearly sufficient to pay for the annual professional development costs of many established comprehensive school reform designs. Nevertheless, the disparity among schools is substantial enough to have a

meaningful impact on teachers' access to professional development services. A school with 40 teachers spending \$900 per teacher would have \$116,000 less in professional development resources than a comparable school spending at the elementary average of \$3,800 per teacher.

Combining district provided school resources with school level investments increases the resources available to promote deep instructional change and also the disparities between schools. In Midwest, one low performing school had \$350,000 or \$12,000 per teacher in district and school level resources devoted to professional development where another in the same performance category had a total of \$16,000 and less than \$400 per teacher. This high level of investment and the inequities between schools create two challenges for districts. The first is to support schools in making effective use of large investments in professional development. In both Midwest and Mega, several schools had significant district resources for professional development that did not integrate well with or even conflicted with school level professional development efforts. The second challenge involves finding ways to target more resources to under-served schools and encouraging them to spend more of their own dollars to build capacity.

6. Districts rethinking their use of professional development spending can make dramatic changes that focus spending more clearly around a theory of school improvement in a short period of time.

One sample district, Southwest, conducted this professional development audit twice—once at the very beginning of its efforts to develop a district level reform strategy and again two years later. In the first year, Southwest was distressed, though not surprised to find that they spent the lowest total amount and percent on professional development activities (Table 2). District leaders aimed to “pool” professional development resources from across district departments, funding sources and activities and redirect them to poorly performing schools in

more integrated school level activities that might impact the classroom more deeply. The district created “cluster support teams” that decentralized supervision, support and professional development closer to the schools. These cluster teams combined resources that used to be organized in separate departments to provide integrated support to each school in developing a powerful school plan and then providing targeted support. The new organization allowed staff who used to serve in compliance and monitoring kinds of roles to provide deeper support that also included ongoing professional development coaching. Next, they created a category of low performing schools called “Schools in Need of Improvement” (SINOI). Each of these schools was required to choose a specific literacy model and provided with district resources to pay for technical assistance implementing it. In addition, each SINOI school received professional development support from a specially trained district team and \$10,000 to pay for teacher time to participate in professional development.

These and other changes showed up dramatically in spending numbers. As Table 9 shows, only 2 years later, total professional development spending had nearly doubled, going from \$11.2 million dollars to \$19.5 million dollars and from 2.3% of operating budget to 4.0%. Table 9 shows that the percent of district professional development efforts targeted to school improvement went from 43%, the lowest in the sample, to 75% in year 3. This puts Southwest’s percent targeted toward schools in line with Southeast, Midwest and Northeast each of whom had significant school restructuring and improvement efforts underway. Fully 36% of all professional development resources were delivered as school based coaching, the most of any district sampled here. District leaders now feel the pressure of needing to insure that this investment generates improvements in classroom practice, but they are clearer about what activities they need to evaluate.

<Insert Table 9 Here>

<Insert Table 10 Here>

Table 11 shows Southwest having a much more focused and balanced professional development strategy. In Year 1, Southwest devoted 40% of all professional development spending to pre-service or induction training for teachers. Departmental teacher training on strategies for students with special needs was the second largest investment at 20%. Two years later, 50% of the dollars were aimed at school level instructional improvement organized around literacy. The analysis also helped Southwest see how few resources they devoted toward developing strong principals and teacher leaders. By Year 3 Southwest had already increased spending on principal development and made changes to increase spending on teacher leadership as well.

<Insert Table 11 Here>

Southwest was able to use this information to define a strategy for professional development that seemed consistent with the research on effective professional development. The next step will be to test and refine this strategy by analyzing which efforts generate improved instruction and student performance and exploring the situations where it seems to work best. Even in one year, student performance increased in a number of the worst performing schools. But, in places where performance did not increase, Southwest had no way of knowing why or targeting further support. To do this, Southwest realized they needed a systematic way of monitoring or measuring whether schools are using their new professional development resources effectively to improve instruction. They are currently

engaged in developing a richer accountability system that systematically measures changes in instructional practice targeted by the school based professional development.

Conclusion

The case of Southwest shows how powerful this methodical quantification and coding of professional development spending can be. Once the district knows how much they are spending, on what activities for whom, they can begin to organize this spending into a deliberate strategy for improving schools and building teacher and principal capacity over their careers. And once the district implements a deliberate strategy, the impact on student performance can be measured. The comparisons presented here show that districts organize and invest differently in professional development. Collecting data from more districts that have deliberate professional development strategies and from more districts over time will provide important information for districts and policymakers. Districts can use this information immediately to craft more sensible, focused professional development strategies. But until we can link these to improvements in student performance we won't be able to judge how much or what kind of investment is needed to sustain district wide school improvement.

Tables and Charts

Table 1
Coding Categories for Target and Purpose

<p><i>Target Individual (Teacher, Principal and other subcategories)</i></p> <ul style="list-style-type: none"> Pre-service Preparation Induction Continuing Education Remediation Teacher Leadership <p><i>Target School</i></p> <ul style="list-style-type: none"> Restructuring/Transition Cost Instructional Improvement Program Support (specialized schools or programs within schools) Support of Special Populations (special ed, bilingual, Title I, gifted)
--

Table 2

	Southwest	Southeast	Midwest	Northeast	Mega
Location	Southwest	Southeast	Midwest	Northeast	Midwest
Enrollment	85,000	59,000	50,000	63,000	477,000
Teachers	5,200	3,900	3,100	4,600	26,350
Schools	120	103	75	130	500
Operating Budget (millions) ^a	\$485.5	\$626.1	\$396.4	\$526.3	3,500
Per Pupil Expenditures	\$5,700	\$10,600	\$7,900	\$8,400	\$7,500
Minority Enrollment	60.9%	93.6%	75.3%	85.0%	85%
Free or Reduced Price Lunch	43.3%	75.4%	65.6%	74.0%	84%

^aAll expenditure numbers adjusted for geographic differences in the costs of goods and services using the National Center for Education Statistics' Geographical Cost of Education Index (GCEI).^{iv}

Table 3
Total Professional Development Expenditures with Contracted Professional Development Days: Five District Comparison

	SouthwestA	Southeast	Midwest	Northeast	Mega	Average
Total Expenditures (millions)	\$11.2	\$19.5	\$8.6	\$19.5	\$123	NA
Percent of Operating Budget	2.3	3.1	2.2	3.7	3.4	2.9
Per Teacher	\$2,100	\$5,000	\$2,700	\$4,200	\$3,900	\$3,600

Table 4
Sources of Funding for Professional Development
Percent of Total Spending
Not Including Professional Development Days

	Southwest	Southeast	Northeast	Midwest	Mega	Average
Federal	28%	36%	50%	24%	28%	33%
State	5%	2%	9%	11%	12%	8%
Local	67%	59%	10%	62%	58%	51%
Private	0%	3%	31%	2%	1%	8%
Total	100%	100%	100%	100%	100%	

Table 5
Professional Development Expenditures with and without contracted professional development days

	Southwest	Southeast	Midwest	Northeast	Mega
% of operating budget With Contracted PD Time	2.3	3.2	3.3	3.7	3.4
% of operating budget Without Contracted PD Time	2.3	3.1	2.2	2.4	1.9
\$ per teacher with Contracted PD time	\$450	\$150	\$100	\$2000	\$2000
\$ per teacher without Contracted PD time	\$450	\$150	\$100	\$520	\$200

Table 6
Professional Development Cost Structure: Percent of PD Spending
Five District Comparison

Cost Structure Element	Southwest	Southeast	Midwest	Northeast	Northeast no Contract Time	Mega	Mega No Contract Time

Teacher Time: Stipends and Subs	21%	4%	4%	13%	19%	6%	9%
Teacher Time: Contracted Days or Hours	0%	0%	0%	35%	0%	46%	0%
Training and Coaching	70%	87%	84%	45%	69%	35%	70%
Administration	5%	5%	5%	1%	2%	5%	7%
Materials, Equipment and Facilities	3%	3%	3%	5%	8%	3%	6%
Travel & Transportation	1%	1%	3%	1%	1%	1%	1%
Tuition & Conference Fees	0%	0%	1%	0%	0%	4%	7%

**Table 7
Professional Development Spending by Target
Percent of Operating Budget**

	Southwest	Southeast	Midwest	Northeast	Mega	Average
School						
% Operating Budget	1.1%	2.5%	1.8%	1.8%	1.1%	1.7%
Dollars Per Teacher	\$970	\$4090	\$2,300	\$2,030	\$1,226	\$2,100
Individual						
% Operating Budget	1.3%	.6%	.6%	.6%	.8%	.8
Dollars Per Teacher	\$1,220	\$925	\$770	\$710	\$925	\$910
Contracted PD Time						
% Operating Budget	0%	0%	0%	1.3%	1.5%	N/A
Dollars Per Teacher	0	0	0	\$1,500	\$1,800	

**Table 8
District Delivery Strategies for Professional Development
Percent of Professional Development Spending (not including Contracted PD Days)**

Target and Delivery Strategy	SouthwestA	Southeast	Midwest	Northeast	Mega	Range
School	43%	82%	72%	74%	57%	
CSRD and Other Models	2%	12%	13%	25%	0%	25%
Department-Based Training	23%	12%	13%	28%	12%	16%
School-Based Coaching	16%	13%	17%	17%	40%	37%
School-Based Lead Teachers	2%	0%	20%	4%	0%	20%
School-Based Instructional Facilitators	0%	25%	0%	0%	0%	25%
Training Academy Coursework	0%	3%	9%	0%	5%	9%
Individual	57%	18%	28%	26%	43%	
Department- Based Training	22%	12%	6%	12%	18%	16%

Professional Development Schools	0%	0%	2%	0%	4%	4%
Mentor	34%	3%	10%	4%	8%	31%
Training Academy, coursework	1%	3%	9%	11%	13%	12%

Table 9
Total Southwest Professional Development Expenditures with Contracted Professional Development Days: Spending on Professional Development changes over three year period

	Southwest A 2000	Southwest B 2002
Total Expenditures (millions)	\$11.2	\$19.5
Percent of Operating Budget	2.3	4.0
Per Teacher	\$2,100	\$2,800

Table 10
Professional Development Spending by Delivery Strategy
Percent of Professional Development Spending
(not including contracted professional development time)
Southwest Year 1 compared to Southwest Year 3

Target and Delivery Strategy	Southwest A Year 1	Southwest B Year 3	Southeast	Midwest	Northeast	Mega
School	43%	75%	82%	72%	74%	57%
CSRD and Other Models	2%	14%	12%	13%	25%	0%
Department-Based Training	23%	12%	12%	13%	28%	12%
School-Based Coaching	16%	36%	13%	17%	17%	40%
School-Based Lead Teachers	2%	0%	0%	20%	4%	0%
School-Based Instructional Facilitators	0%	10%	25%	0%	0%	0%
Training Academy Coursework	0%	3%	3%	9%	0%	5%
Individual	57%	25%	18%	28%	26%	43%
Department- Based Training	22%	1%	12%	6%	12%	18%
Professional Development Schools	0%	0%	0%	2%	0%	4%
Mentor	34%	21%	3%	10%	4%	8%
Training Academy, coursework	1%	3%	3%	9%	11%	13%

Table 11
Professional Development Spending by Target and Purpose
Percent of Total Professional Development Spending
(not including contracted professional development time)

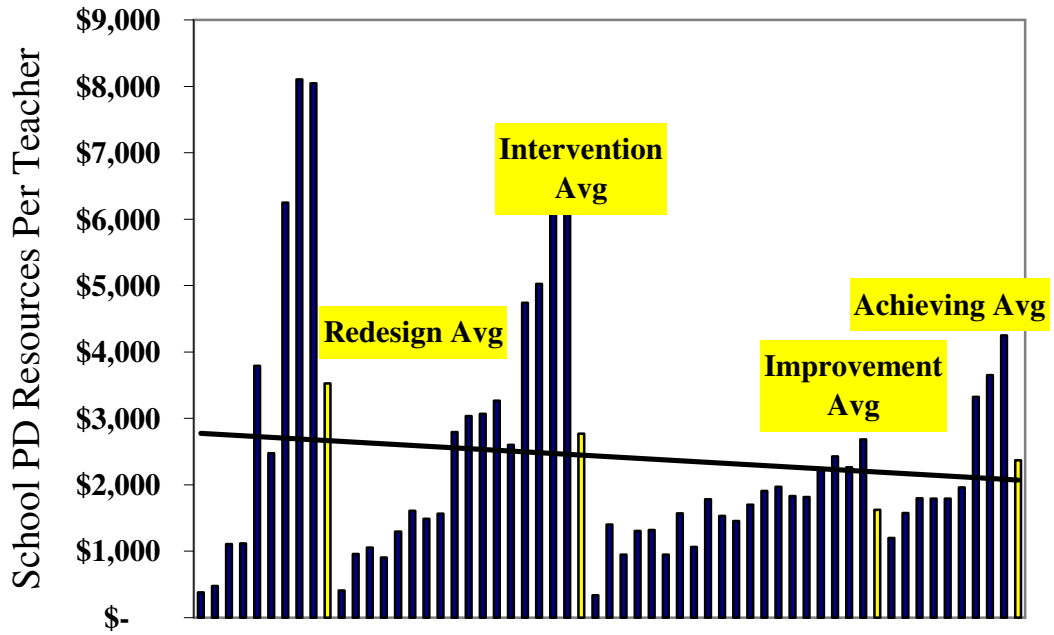
Target and Purpose	Southwest A	Southwest B
---------------------------	--------------------	--------------------

	Year 1	Year 3
School	43%	75%
Change conditions/Restructuring	2%	10%
Instructional Improvement	10%	50%
Program Support	11%	5%
Support of Special Populations	20%	10%
Individual: Teacher	57%	23%
Preservice/Induction	40%	12%
Remediation	0%	0%
Continuing Education	14%	8%
Leadership Development	3%	3%
Individual: Principal	0%	2%

Charts

Chart 1

PD Resources by School Performance



References

Archibald, S. & Gallagher, H. A. (In press, 2002). A case study of professional development expenditures at a restructured high school. Education Policy Analysis Archives.

Corcoran, T. B. (1995). Helping teachers teach well: Transforming professional development (Report RB-16-June 1995). Philadelphia: Consortium for Policy Research in Education.

Elmore, R. F. (2002). Bridging the gap between standards and achievement: The imperative of professional development in education. Washington, DC: Albert Shanker Institute.

Elmore, R. F., & Burney, D. (1999). Investing in teacher learning: Staff development and instructional improvement. In L. Darling-Hammond & G. Sykes (Eds.), Teaching as the learning profession: Handbook of policy and practice (pp. 263-291). San Francisco: Jossey-Bass.

Fermanich, M. (In press). School spending for professional development: A cross case analysis of seven schools in one urban district. Elementary School Journal.

Gallagher, H. A. (In press, 2001). Elm Street School: A case study of professional development expenditures. Education Policy Analysis Archives.

Hertert, L. (1997). Investing in teacher professional development: A look at 16 school districts. Denver, CO: Education Commission of the States.

Killeen, K. M., Monk, D. H., & Plecki, M. L. (2000). School district spending on professional development: Insights available from national data. Journal of Education Finance (Forthcoming).

Little, J. W., Gerritz, W. H., Stern, D. S., Guthrie, J. W., Kirst, M. W., & Marsh, D. D. (1987). Staff development in California: Public and personal investments, program patterns, and policy choices (Report PC87-12-15-CPEC). Berkeley and San Francisco: Far West Laboratory for Educational Research and Development and Policy Analysis for California Education.

Miles, K. H., Bouchard, F., Winner, K., Cohen, M. A., & Guiney, E. (1999). Professional development spending in the Boston Public Schools: A joint report of the Boston Plan for Excellence and the Boston Public Schools. Boston, MA: Boston Plan for Excellence and the Boston Public Schools.

Miles, K. H., & Hornbeck, M. (2000). Rethinking district professional development spending to support a district csr strategy (Resource Reallocation, Issue #3). Arlington, VA: New American Schools.

Miles, K.H., Miller, Hornbeck and Fermanich, (2002) Chicago Public Schools Professional Development Project Final Report, Chicago Public Education Fund.

Miles, K.H., Odden,A, Fermanich M., Archibald, S. , Gallagher, A. "*Understanding and Comparing District Investment in Professional Development: Methods and Lessons from Four Districts*". *In Press*

Miller, B., Lord, B., & Dorney, J. (1994). Staff development for teachers: A study of configurations and costs in four districts. Newton, MA: Educational Development Center.

Moore, D., & Hyde, A. (1981). Making sense of staff development: An analysis of staff development programs and their costs in three urban districts. Chicago, IL: Designs for Change.

National Center for Education Statistics. (2002). Cost of education index dataset for 1993-94, [On-Line]. Washington, D.C.: National Center for Education Statistics. Available: http://nces.ed.gov/edfin/prodsurv/data.asp#cost_of_ed.

Odden, A., Archibald, S., Fermanich, M., & Gallagher, H. A. (2002). A cost framework for professional development. Journal of Education Finance.

Rice, J. K. (2001). Cost framework for teacher preparation and professional development. Unpublished manuscript, University of Maryland, College Park: MD.

Appendix

Delivery Strategies

- *Comprehensive school reform designs (CSRD):* Comprehensive, integrated designs for improving school performance. A comprehensive design would address school improvement by using a prescribed process and set of materials that address improve instruction across all grades in a school. These may include “off the shelf” whole school models such as Success for All or Co-Nect or locally developed models.
- *Department-based training:* Training provided through various central office departments and offices that is not organized as “school based coaching” defined below. This training is frequently more narrowly focused and less likely to be aligned with broader district priorities. Examples include training on special education regulations through a district’s special education department, or technology training sponsored by an instructional technology department.
- *School based coaching:* Coaches assigned by the district to work with instructional staff in the schools on either school improvement and organizational issues or high priority curricular areas. Examples may include literacy or math coaches or coaches working to facilitate staff review of student performance data and creation of a school improvement plan.
- *School Based Lead Teachers:* Teachers who have a formal title of Lead teacher and work within a school to lead improvement efforts in some way. Examples include the use of “Literacy Lead” or “Team Leader” teachers that are paid an additional stipend and have defined responsibilities related to providing school level coaching or professional development.
- *Mentors:* Master teachers to support and coach other teachers, generally either first-year or struggling veteran teachers or with pre-service teacher interns.
- *School-based instructional facilitators:* Teachers who are members of their schools’ instructional staff and have an explicit role in leading instruction and do not handle a full class load. This can be a district sponsored position or a school level decision. They are generally accomplished teachers who serve as the instructional leaders in their schools, frequently supporting specific strategies such as comprehensive school reform designs, curriculum standards or literacy instruction.
- *Training academy.* A department or organization with mission of offering coursework and other training opportunities to teachers and principals mostly on a volunteer basis. Many have an in-house professional development “academy” that offers a catalog of short-term workshops on a wide variety of topics. Alternatively, a district might contract with an outside organization to offer training programs.

- *Professional Development Schools: Demonstration schools staffed with master teachers and structured to allow apprenticeships. The additional costs of creating such schools would be included here but not the direct cost of providing instruction to students in these schools.*

ⁱ This article draws on some of the work conducted through a collaboration of the Consortium for Policy Research in Education at the University of Wisconsin and reported in Miles, Odden, Fermanich and Archibald (forthcoming)

ⁱⁱ For an example of how the inclusion of this school level expenditure affects spending levels, please see Archibald & Gallagher (forthcoming); Fermanich (forthcoming); Gallagher (forthcoming).

ⁱⁱⁱ As used here, “local sources” refers to the districts’ general fund, which in most cases combined local property taxes and state per pupil financing to be used at the districts’ discretion.

^{iv} **(National Center for Education Statistics, 2002).**