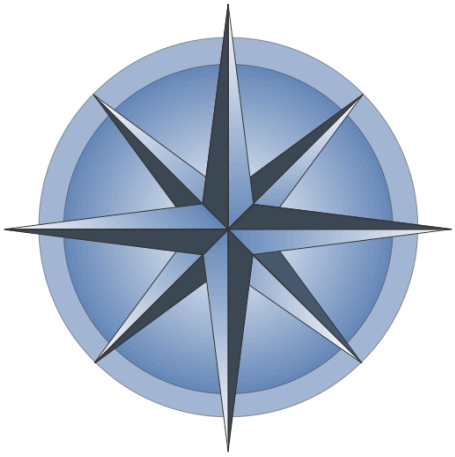
School Leadership Study
Developing Successful Principals



Understanding the Costs of Professional Development Initiatives: A Framework and Applications

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About the School Leadership Study

Principals play a vital role in setting the direction for successful schools, but existing knowledge on the best ways to prepare and develop highly qualified principals is sparse. What are the essential elements of good leadership? How are successful leadership development programs designed? What program structures provide the best learning environments? What governing and financial policies are needed to sustain good programming? "School Leadership Study: Preparing Successful Principals" is a major research effort designed to answer these questions. Commissioned by The Wallace Foundation and undertaken by Stanford University in conjunction with The Finance Project, the study is examining eight highly-developed pre- and inservice program models to address key issues in developing strong leaders. Once effective processes have been identified they can by replicated, ensuring that more and more schools become vibrant learning communities under the direction of outstanding leaders.

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Introduction

The current policy emphasis on improving teacher quality and principal leadership in order to improve student achievement has stimulated efforts to reform the preparation and ongoing professional development of teachers and educational leaders in America's schools. As with any type of education reform, the ability of schools, school systems, universities, and other organizations to adopt and implement high-quality professional development programs depends, in large part, on the availability and allocation of appropriate resources to support the initiatives. To make informed decisions about financing professional development programs, policymakers and program leaders need easy-to-use, adaptable tools to analyze programs' costs. They need comprehensive information that goes beyond a line item in a budget. They need detailed analysis of how much it costs to deliver and operate a principal professional development program, what types of resources are needed, and what individuals and organizations are expected to provide those resources. This information can help them make informed comparisons among alternative professional development investments and plan for the implementation and sustainability of initiatives.

In this paper, we describe a cost analysis framework and approach that can be easily understood by a range of relevant audiences and that has been successfully used to estimate the costs of a range of professional development initiatives. The paper illustrate its use by

drawing on our experience applying the framework in three different applications. In three separate studies, we used the cost framework to examine the following types of professional development initiatives:

- Pathways to Teaching Careers program. This program provides access to university teacher certification programs for individuals who are currently teaching without certification, who work as para-professionals in the schools, and who have participated in the Peace Corps and would like to become teachers. The goal of the program is to remedy teacher shortages by providing new avenues to teacher certification. Our study included nine sites, with three sites representing models serving each of the three targeted populations of potential teachers. Some sites were associated with public and others with private institutions of higher education. Most were multi-year programs spanning two to three years.[1]

- National Board Certification candidacy and support programs. National Board Certification candidacy is the process teachers undertake to attain voluntary certification of accomplished teaching by the National Board for Professional Teaching Standards (NBPTS). Many candidates participate in support programs during the candidacy process, which occurs over most of a school year (or up to an additional two years for candidates for candidates who do not achieve certification on the first attempt). In a study of National Board Certification as a form of professional development for teachers, we examined NBC candidacy for individuals who participate in a formal candidate support program. Our study on the costs of this model of professional development included four support programs across the country representing a variety of program structures and activities, as well as policy environments.[2]

- Principal professional development initiatives. As part of a study of exemplary professional development programs for principals, we are examining the costs of eight preparation and in-service programs located in six states. Each of the programs is university-based or district-based, and in some of the sites, the programs are linked, representing a continuum of preparation and in-service professional development focused on developing instructional leadership. The initiatives include components such as coursework, internships, mentoring, and principal networking and vary widely in their design, intensity, and financing.[3]

The Cost Template Approach[4]

Our cost analysis method "unpacks" costs in a systematic way that specifies the resources needed to provide and undertake a principal professional development program and identifies the distribution of the cost burden. Calculating cost estimates using this approach

allows users to gain an understanding of the types of costs associated with a professional development program, as well as how these costs are distributed across various stakeholder groups. It provides a comprehensive estimate of the requisite costs and resources to operate a program model.

We have designed a cost template to be used as the basic tool for systematically collecting and estimating the costs of principal preparation and development programs using the approach described above. The template allows the user to identify and assign values to all relevant resources used to implement a specific program. The template is designed to be a flexible tool that can accommodate and reflect varying program designs. The template used for the study of principal preparation and in-service professional development programs is attached as an example.

Identifying Program Components and Ingredients. The first step in the cost analysis involves identifying the components of and services included in the program as well as the resources required for those components and services. The first column of the template prompts the specification of the program components and services, which are listed as major headings in the first column.

Each of our studies involved identifying a different set of major program components. These components depend on the design of the professional development program or programs being examined, and identification of the relevant components require a sufficient understanding of their activities. This may be an iterative process wherein the definition of the major program components is refined as additional data is collected about the program activities and the resources involved.

The set of program components used in each of our three studies is shown below. Note that while the list is different for each study, each includes a component for administration and infrastructure activities and specifies the major activities of the program in a way that allows users to consider the costs of the program model with or without those activities. The goal is to comprehensively capture all program components in a way that is relevant to decision-making about the use of resources.

Program Components in Three Applications of Cost Template

Pathways to Teaching Careers

- Administration/infrastructure
- Student recruitment and admissions
- Academic program
- Support services
- Student assessment
- Follow-up services

NBC Candidacy and Support Programs

- Administration and Infrastructure
- Information and Recruitment
- Group Meetings
- Portfolio Development Outside Formal Meetings
- Mentor Training
- Application Fee
- Research, Development, and Dissemination
- Future Salary Obligations

Principal Preparation and In-Service Professional Development Programs

- Administration and Infrastructure
- Information, Recruitment, and Selection
- Coursework
- Internships
- Mentoring and Mentor Training
- Other

Under each major heading is a list of component-relevant resource categories. These categories are consistent across all the studies and include 1) personnel time; 2) facilities,

materials, and equipment; 3) travel and transportation; and 4) other.[5] The second column, "Ingredients," requests the user to identify the specific resources used in the program in these categories.[6] This includes donated and volunteered resources along with resource requirements that translate into expenditures. For example, in the study of principal professional development programs, personnel included, among others, the designations of university-based program director, district-based program director, retired principal mentors or coaches, current principal mentors, university dean, university education faculty member, budget officer, data technician, and participant. Facilities, materials, and equipment in the study of National Board Certification candidacy and support programs included office space, office supplies, videotapes, TV/VCR and videotaping equipment, and copying and printing services. Travel and transportation ingredients include expenses such as gas, airplane fares, and time associated with travel and transportation to engage in the program activities. The "other" category allows the user to identify other ingredients that have not been accounted for elsewhere. The goal is to be as comprehensive as possible without double-counting any resources.

Calculating Total Annual Cost. The next set of columns in the template guides the calculation of the total annual cost of the program. The first column in this section, "Amount," specifies the amount of each ingredient listed in the previous column. The resource amounts are left in the most natural and descriptive units possible. For example, personnel are recorded in terms of the number of positions needed or hours per year, while travel costs might be represented in terms of the number of miles driven and the amount of time spent traveling.

The next column, “Number of Units,” indicates the number of the resources specified in the previous columns that are required for the program. Some resources are directly linked with the number of participants in the program (e.g., coursework materials), while others are relatively independent of this factor (e.g., program director). This distinction is important in planning principal professional development programs because there are potential implications for economies of scale.

The column “Unit Value” requests a dollar value for each of the ingredients listed. In the case of personnel, this entry includes salary as well as fringe benefits, bonuses, and other add-ons. The figure entered in this column corresponds with the units used in the "Amount" column. For example, if hours-per-year is the unit used in the "Amount" column, then the appropriate hourly wage should be entered in the "Unit Value" column. Likewise, if the number of positions is entered in the "Amount" column, then the annual salary for that type of position should be entered in the "Unit Value" column.[7]

The next column, “Period,” requests information on the recurrence of the cost. Some resources are required year after year, such as salaries and benefits for personnel. Other resources, such as equipment, may be used for a number of years and should not simply be added into the annual cost estimate each year. The data in this column indicate the number of years over which various resources can be used. The number of years representing the expected life of the resource is entered, with recurring annual costs designated as “1.”

The column titled “Shared” indicates the degree to which the same ingredient (e.g., a staff member) is used across multiple service components or multiple programs. If the resource is shared with other service components in the program, it should be prorated (e.g., time of the staff member) according to how much is spent on each component. This is most

evident in the distribution of administrative time across various program components and services. If the resource is shared with programs other than the one under study, the fraction devoted to the study program should be entered (e.g., the professional development program uses half, or 50 percent, of the office space listed in the "Ingredients" column). This entry should be "1" for fully-dedicated resources and should be expressed in a decimal format (e.g., 0.50 for 50 percent) in the case of shared resources.

"Annual Cost," calculates a dollar figure representing the total annual societal cost of each resource. This information should be calculated using the entries in the previous five columns. The appropriate formula is:

Annual Cost = (Amount x Number of Units x Unit Value x Shared)/Period.

The figures in the "Annual Cost" column can then be vertically summed to derive the total annual cost estimate of the resources required to support the program. The "Total Annual Cost" estimate is calculated in the second to last cell at the bottom of the "Annual Cost" column. The cell at the bottom of the "Annual Cost" column divides the total cost by the number of participants in the program in the study year to derive an estimate of the "Average Cost Per Participant." Calculating annual cost gives a view of what it takes to provide the full set of program activities at their current scale.[8] The per-participant estimate enables cost comparisons across programs by controlling for the size (i.e., number of participants) of each.

Distribution of the Cost Burden. The next set of columns in the template analyzes the distribution of the cost burden by illustrating how the costs of the program are supported by various stakeholders and financial sources. These may include the federal government, state, school districts, schools, universities, unions, grants, tuition, fees, stipends, school principals,

program participants, staff, businesses, and community groups. For example, one of the programs in the study of National Board Certification candidacy and support programs was a partnership that received resources from the state, districts, schools, the local university, an external grant, and business sources, as well as the uncompensated time of staff and NBC candidates.

Specified in fiscal units, the entries across a row in this section should sum to equal the figure in the "Annual Cost" column of that same row. The vertical sum of each column indicates the cost of the program to each constituency. However, the fiscal amounts entered do not necessarily imply that dollars actually change hands. In many cases (e.g., participants' time), it is time rather than money that is devoted to the program. This analysis can also highlight how making substitutions, such as paying volunteers for their time or obtaining more grant funding, would shift the cost burden.

Using the Cost Template

Step 1: Data Collection. The cost template outlined in the previous section serves as the basic framework for data collection and analysis. The template provides a systematic tool for itemizing all of the resources required for the program and estimating the full cost of the initiative. Data collected from the field are used to complete a cost template for each site in the study. These are the *raw data templates*; they present the actual amounts, values, and distribution of resources identified through intensive data collection activities at each site (including document review and interviews with a wide range of individuals associated with the program). While cost estimates could be constructed from the raw data templates, comparing these estimates across sites is problematic for several reasons. First, geographic cost differences across sites may inflate costs, particularly personnel costs, in some areas

compared with others. Second, some sites may "over-spend" for particular resources, which could artificially inflate the cost (e.g., they may have higher budgets than necessary to deliver the program, so they hire over-qualified personnel). Third, there may be resource differences across the programs that have little to do with program design, are difficult to estimate, and/or are not relevant factors in the cost estimates. Taken together, these issues imply a need for *standardized cost templates* that deal with these issues and, ultimately, facilitate even-handed comparisons across sites.

Step 2: Standardize the cost templates. The process of "standardizing" the cost templates involves three steps. The first step is to identify and apply a set of "decision rules" that facilitate similar coding and treatment of data across sites. The list of decision rules for an analysis can include things from how to account for the time of substitute teachers (six hours vs. eight hours per day) to specifying travel in round-trip terms. The motivation behind these decision rules is to ensure that data are entered into the templates in a consistent manner across sites so that comparable cost estimates are generated. Examples of decision rules are provided below.

Standardizing Templates: Identify and Apply Decision Rules

Examples of decision rules from our three studies:

- Equipment costs (LCD, Overhead, TV/VCR) should be calculated in terms of the time used (not ownership).
- A five-year period should be used for the lifespan of office equipment. Ten years should be used for office furniture.
- Substitute teachers should be assumed to earn standard teacher wage (35/hr) and teach for 6 hrs per day.
- Substitute teacher time should offset something else (usually teacher time) to avoid double counting. Same with stipends. These contributions should appear in the distribution of the cost (e.g., districts or schools pay for sub time, grants provide stipends), but should not add to the total cost.

Travel and transportation information should be entered as round trip distance/time.

The second step in standardizing the templates involves imposing assumptions about resources/inputs that should not be expected to vary across sites or are not relevant to the analysis. This step involves difficult decisions about what sorts of resources should be allowed to vary across sites and what sorts of resources should be held constant. In general, if the resources in question are not part of the program design, but rather are artifacts of the location, the budget, or some other external factor, the analyst should make an effort to standardize those resources across programs. Several examples are offered from our three analyses.

Standardizing Templates: Resources that Don't Vary Systematically Across Sites

- The Pathways program provides non-traditional teacher candidates the opportunity to earn certification through teacher preparation programs at post-secondary education institutions. Our approach to the analysis was to estimate the additional cost incurred by the Pathways programs. In other words, we did not include in the analysis the costs of regular services associated with the teacher education program like admissions and student assessment, if they did not factor into the Pathways program. These were not considered to be resources that were associated with the design of the program, or that could be expected to vary systematically across program sites

- In the NBPTS study, we struggled with how to handle the extensive time that NBC candidates invest in the preparation of their portfolios. This component of the initiatives was difficult, in part, because we did not have an adequate sample of candidates at each site to provide a reliable estimate of the amount of time invested in the process. Further, it was clear from the candidates who did participate in our focus groups that portfolio preparation involves lots of time that is not carefully tracked and that varies greatly across individuals. As a result, we decided to standardize the time and materials that candidates invested in portfolio preparation. We used our own field data to construct these standard values and tested them against national average data from the National Board for Professional Teaching Standards. We applied these estimates across programs.

- The programs in the study of professional development for principals were typically small programs within a large institutional setting of a university or school district. As a result, it was difficult to obtain precise information on the "overhead" resources of the large institution used by the program, such as space costs or data analysis provided by a school district's central office, or accounting and recordkeeping functions performed centrally by the university. In this case, we used actual overhead charges experienced by the program or standard amounts of resources such as office space to represent these costs.

The final step in standardizing the templates involves imposing "standard values" of resources so that cost estimates can be generalized and not reflect the unique circumstances of any particular site (e.g., geographic cost differences). These standards values are established using a variety of data sources including the Bureau of Labor Statistics, the National Center for Education Statistics, and average costs from leading vendors (e.g., for computers) and service providers (e.g., for internet service). It is important to note that state and local decision makers can substitute locally-representative values to generate cost estimates that reflect their own circumstances.

Standard Templates: Impose Standard Values

- In the Pathways study, each teacher certification program was affiliated with an institution of higher education (IHE). Some were IHEs and some were private. This issue of public/private status of the affiliated IHE had serious implications for the magnitude of the resulting cost estimates, given the cost differences at different types of institutions. To handle this issue, we constructed two standardized cost templates for each sites: one applied the resource values associated with private IHEs, and the other applied resource values associated with public IHEs. This approach provided policy makers with cost estimates for each program design for both types of institutional affiliations.

- The NBPTS analysis included sites that were based in a variety of settings. This design factor resulted in program directors situated in a variety of institutional contexts that have cost implications. To deal with this issue, we use data from the Bureau of Labor Statistics to identify the national average cost of a program-director position in a variety of settings including school, union, district, and post-secondary institution.

- In the analysis of principal professional development, the programs were located in different parts of the country with substantial variations in geographic price differences as well as expected travel times and distances to reach central locations. In this study, we standardized the value of travel to state or national conferences at $1200 per trip, based on average values such as federal per diem rates and national average air fares.

Analyzing the Cost Data

Information included in the standardized cost templates can be analyzed in a variety of ways. Below we describe how analysts can draw from the information provided in the templates to inform a range of research and policy questions. First, we explain how the information can be used to describe general program design and the resource requirements to support that design. Next, we discuss the range of cost estimates that can be calculated using data in the cost templates.

Program Design and Resources Required

The first few columns of the templates provide important descriptive data on the design of alternative programs and the resources required to support those designs. Before calculating any cost estimates, analysts should use the data in the first two columns of the template to construct an overview of the various programs being examined. This is a key step in the analysis because it provides policy makers with a sense of the program components, and the types of resources required for each of the program components, and the degree to which there is variability across sites in general program design. Such information is useful to those considering adopting the program who need a sense of the resource requirements to make decisions about the feasibility of such a program.

Cost Estimates

A variety of cost estimates can be constructed from the information in the standardized cost templates:

1. the total costs of the programs

2. the total annual costs of the programs
3. the costs of the various programmatic components that define the programs
4. the costs of conventional budget categories
5. the distribution of the cost burden across various individuals and organizations.

Each type of cost estimate provides important information to policy makers considering their various investment options. Further, each provides unique information to address different types of research and policy questions.

Before describing the various types of cost estimates, it is important to point out that it is easiest to use the template to calculate annual costs of the program. This can be done on a total and per-participant basis. In addition, costs per completer can be calculated (e.g., fully prepared teachers in the case of the Pathways cost analysis, candidates who achieved certification or retried in the second or third years in the case of the NBPTS analysis, and participants in multi-year university preparation programs or induction support programs in the case of the principal professional development study), but these calculations can be complicated in the case of multi-year programs or programs that offer second-chance options. Presenting cost estimates in per unit terms (e.g., per participant or per completer) is useful because total cost estimates are driven in large part by the size of the programs. A key issue here is the distinction between fixed and variable costs. Fixed costs are those that are insensitive to the number of individuals served by the program (e.g., administration costs). Variable costs are those that are directly related to the number of individuals served by the program (e.g., costs of coursework). Large programs might appear to be more costly than smaller ones when the comparison is based on total costs due to the variable costs. However, when using per participant costs as the comparison the opposite is likely to occur: smaller

programs typically appear to be more costly than larger ones. Because it adjusts for program size, the cost per participant estimate is typically a better tool for comparing costs across programs. However, to the degree that program size is an important design element or if total budget is the key concern, total cost estimates can be useful as well.[9]

Adjusting Cost Estimates for Program Size

- In the Pathways study, we were particularly concerned with the cost of producing a teacher through the program. Given the high attrition rates associated with some of the programs in our sample, the per teacher costs were quite high relative to the per participant costs.
- In the NBPTS study, one program served 100 candidates each year while another served only nine candidates in the study year. Examining total costs as well as per participant costs revealed some diseconomies of small scale for the program serving nine NBC candidates, resulting from excessively high costs related to resources associated with program administration and infrastructure.
- In the principal professional development analysis, programs varied in numbers of participants from large university programs to tailored programs for selected small groups of aspiring principals from certain districts. These differences in program design were reflected in significantly different total and per-participant cost estimates for similar types of program components.

Total Program Costs. Total program costs account for the full value of all resources associated with the program over time. These numbers can be quite high since they include both monetary and non-monetary resources, including budgetary and donated resources from a variety of contributors. In addition, these estimates account for the full duration of the program. These cost estimates provide decision makers with a sense of the total stock of resources that are required to provide the program from start to completion.

Total Annual Program Costs. Total annual program costs account for all of the resources required to provide the program on an annual basis. These costs can be calculated

in a variety of ways, depending on the structure of the program. For one-year programs, they are simply the sum of the value of all resources used to provide the program. For multi-year programs, to the extent that multiple cohorts of equal size are moving through a program such that there is always a first-year cohort, a second-year cohort, and so forth, the total annual cost can simply be calculated by dividing the total program cost by the number of years. However, to the extent that the size of cohorts varies or one cohort completes the program before another is started, the annual costs may vary from year to year. Total annual program cost estimates provide policy makers with information needed to construct annual program budgets.

Costs of Specific Program Components. Costs of program components break the total cost estimates into the categories that represent the various components and services that comprise the programs (e.g., administration/infrastructure; information and recruitment; coursework; mentoring; assessment; and so forth). These program-specific categories are the headings in the first column of the cost template described above. Since personnel is typically the largest cost, these categories can be further distinguished as personnel versus non-personnel costs. Cost estimates of specific program components help decision makers understand what is driving the cost of the program. These estimates can also highlight potential areas to explore for greater efficiency. For instance, relatively high annual per-participant costs of administration may signal a need for improved economies of scale through program expansion.

Costs of Conventional Budget Categories. These cost estimates present program costs in terms of four broad budget categories: (1) personnel, often designated as compensated and uncompensated time; (2) facilities, materials, and equipment; (3) travel and

transportation; and (4) other. These cost estimates also give policy makers a sense of what categories are driving the cost of the program. For instance, is it direct costs associated with personnel or is it the uncompensated time of program participants that accounts for the majority of the cost? Presenting costs in terms of budget categories also offers a familiar framework for administrators, allowing them to compare the requirements of this program with others in their systems and to explore potential opportunities for multiple programs to draw on the same pool of available resources.

Distribution of the Cost Burden. The costs of professional development programs may be distributed across a range of individuals and organizations including states, school districts, schools, universities, grants, businesses, unions, teachers and teacher candidates, mentors and program directors, and others. The template can be a useful tool in estimating the distribution of the cost burden in terms of the share borne by different sources, the value of the resources contributed by the various sources, and a sense of the actual resources provided by each source (e.g., number of hours, amount and type of equipment). This type of information can be critical to policy makers planning to implement a new program since it provides a sense of the array of resources – both budgetary and volunteered – that are required to support the program. If these resources are not readily available, policy makers need to explore opportunities for substitutions, or consider alternative programs that require a different set of supports.

Contextual Factors in Using This Approach

The cost tool described above and the resulting cost estimates provide a useful and easily understandable way of collecting and analyzing information on the cost of particular

professional development programs and alternative professional development models. The cost estimates generated provide a consistent, standardized, and comprehensive way of understanding the range of resources required to provide professional development initiatives to educators. However, our experience applying this framework in different studies points out some of the complexities of this approach when used across a variety of different professional development program designs and local policy contexts.

It is important to recognize that the cost estimates yielded by the analysis will vary depending on local circumstances. In particular, the analysis assigns value to the resources using national averages. The cost templates provide a tool for local decision makers to examine the range of resources required for professional development programs and to adjust the cost estimates according to their local circumstances. In this way, the cost analysis can be used across a variety of settings that vary in terms of the cost of resources required and the sources of support available to cover those costs.

Another important consideration is that the distribution of costs presented in this study will vary according to the local policy context. A variety of policies can affect how the cost burden of professional development initiatives is shouldered by different individuals and organizations. For example, to the extent that states provide release time for teachers to participate, the costs to the teachers (uncompensated time) decrease and the costs to the state increase. Similarly, districts and schools might be in a position to provide release time, resulting in a similar shift in the distribution of the cost burden. Examples of policies that we identified in our studies that might shift the cost burden from individual teachers or principals to other entities include release time, subsidies for tuition and fees, and stipends for teachers,

principals and other educators involved in the program. Any of these policies could be implemented at the state, district, or school levels.

In addition, many states and some districts offer a salary boost for teachers and principals who have earned additional credentials through professional development programs. Considerable debate surrounds whether such future salary obligations should be included as a cost of the professional development initiatives. In their study of the costs of teacher professional development in California, Little, et al. (1987) report that the additional salary commitments that teachers earn through university course credits amounted to almost $600 million annually, equaling 160 percent of the direct costs of professional development in that state. When included in the analysis, this category represents the taxpayers' largest investment in teacher professional development. Ross's (1995) analysis of teacher development and salary incentives in Los Angeles reports that salary credits (i.e., the transfer of professional development credits into higher salaries) are a powerful incentive to encourage teachers' participation in in-service professional development, and that such incentives could be used more effectively to promote higher levels of student performance. Others have argued that future salary obligations should not factor into estimates of the cost of professional development, but should be considered as a routine personnel cost (rather than a training cost).

Given the high cost associated with future salary obligations, careful attention should be paid to the appropriateness of including this as a cost element of professional development. One way of resolving this issue lies in determining whether the additional salary increments are design elements of the school system's professional development policy or part of routine human capital development apparent in education and business sectors.

Consider the first possibility—that the future salary obligations are a design element of professional development policies intended to promote certain desirable behaviors. In other words, professional development policies could be designed in such a way that additional salary increments serve as a mechanism used by school system administrators to encourage educators to engage in certain types of professional development, to do this at particular stages of their careers, and to achieve certain levels of performance. The award of the salary increments is dependent on meeting these kinds of criteria. Since this approach could be viewed as an alternative to "pay-up-front" approaches (e.g., providing stipends and/or paying for tuition), not including future salary obligations as a cost of professional development could seriously distort the cost estimates, favoring districts that rely on these kinds of salary incentives in their professional development programs.

On the other hand, the future salary obligations associated with participation in professional development could be viewed as a routine investment in human capital. From this perspective, upgrading skills through professional development (as is routinely done in many professions) leads to higher levels of productivity. The employer rewards the increase in employee productivity though salary hikes. The increase in productivity realized by the firm (or school system in this case) presumably outweighs the additional salary payments made to the employees. In sum, participation in professional development leads to greater productivity, which is subsequently reflected in salary increases. Since the salary increases are a reflection of greater productivity, it wouldn't make sense to include them as a cost of professional development. Although viewing professional development this way is a plausible approach, it is complicated in education by the questionable causal relationship between participation in professional development and subsequent productivity.

Our experience indicates that the tool is flexible enough to accommodate different program designs and policy decisions. By providing cost estimates built from disaggregated data and able to be analyzed in a variety of ways—for example, by excluding certain components or adjusting for local resource values—this approach provides a valuable tool for decision makers to understand the costs implications of different professional development designs and policies.

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[1] Rice, J.K. & Brent, B.O. (2002). An alternative avenue to teacher certification: A cost analysis of the Pathways to Teaching Careers Program. Journal of Education Finance, 27(2), 1029-1048; Rice, J.K. & Brent, B.O. (2000). Costs and budgeting for success. In B.C. Clewell and A.M. Villegas (eds.), Building effective programs for preparing new teachers from new sources. Washington, D.C.: The Urban Institute.

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[3] The research project, "School Leadership Study: Developing Successful Principals," was commissioned by The Wallace Foundation and undertaken by The Stanford Educational Leadership Institute in conjunction with The Finance Project. This research began in Fall of 2004 and is ongoing. See http://seli.stanford.edu/research/sls.htm.

[4] For methodological discussions of the template approach to unpacking cost, see Jennifer King Rice, Cost Analysis in Education: Paradox and Possibility, Educational Evaluation and Policy Analysis, 19(4), 309-317; and Jennifer King Rice, Investing in Teacher Quality: A Framework for Estimating the Cost of Teacher Professional Development. In W. Hoy & C. Miskel (Eds.), Theory and Research in Educational Administration, volume , pp. 209-233, (Greenwich, CT: Information Age Publishing, Inc.)

[5] For more detail on these resource categories and how they were developed, see Jennifer King Rice, Cost Framework for Teacher Preparation and Professional Development (Washington, D.C.: The Finance Project, 2001).

[6] For a description of the "ingredients approach" to cost analysis, see Henry M. Levin and Patrick J. McEwan, Cost-Effectiveness Analysis: Methods and Applications, 2d ed. (Thousand Oaks, Calif.: Sage Publications, 2001).

[7] The user has the option of entering actual values for each resource in each site or "standard" values for selected resources. If costs are going to be compared across programs in multiple sites, standard values applied universally across sites enable comparisons that account for geographic differences in the cost of resources.

[8] The average annual cost per participant does not represent the cost for any one participant to complete the program if the program duration differs from one year.

[9] Also at issue here are questions regarding the "optimal size" of programs.

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