

Principles of Determining the Costs of Professional Development for School Leaders

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Abstract

Professional development (PD) is a central component of school improvement, yet much of the literature on PD spending focuses on teachers. Despite the substantial resources allocated to PD, little is known about the corresponding investments made in school leaders. This article reviews the research on teacher PD spending and uses those insights to develop a set of principles for school leaders. It also addresses the current gap in evidence about PD spending for school leaders by offering guidance on how to capture and assess those expenditures.

Résumé

Le développement professionnel (DP) est un élément essentiel de l'amélioration scolaire. Pourtant, la plupart des recherches sur les dépenses en DP se concentrent sur les enseignants et enseignantes. Malgré les ressources considérables allouées au DP, on en connaît peu sur la part du DP consacrée aux dirigeants scolaires. Cet article passe en revue les recherches sur les dépenses en DP pour les enseignants et utilise les connaissances acquises ainsi pour élaborer un ensemble de principes à l'intention des dirigeants scolaires. L'article comble également le manque actuel de données probantes sur les dépenses en DP pour les dirigeants scolaires en offrant des pistes à suivre sur la manière de recenser et d'évaluer ces dépenses.

Keywords / Mots clés : professional development spending, school leaders, school improvement, teachers / dépenses en développement professionnel, dirigeants scolaires, amélioration scolaire, enseignants et enseignantes

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States and districts across the United States continue to seek avenues to improving schools. School reform is not new to the US educational system (Allington, 2009; Shannon, Edmondson, Ortega, Pitcher & Robbins, 2009), and is now legislated by the *Every Student Succeeds Act* (ESSA), which requires states to improve their schools. Owing to this, efforts to improve and reform schools have been underway for decades. Research and best practices indicate that intensive high-quality professional development (PD) is likely to be a part of any effective improvement strategies (Joyce & Showers, 2002; Rowan, Correnti & Miller, 2002; Sanders & Rivers, 1996). Given the complementary associations between school and PD, the latter has been emphasized across schools; for example, teacher PD is crucial for improving teachers' implementation of evidence-based programs and practices (EBPs) as well as for student outcomes. In the same context, the federal law for educator licensure (ESSA, 2015), in coordination with state education departments, specifies the type and number of direct contact hours needed. School districts are therefore motivated to facilitate direct contact hours for PD, which may supersede the importance of ensuring that PD elicits implementation fidelity and student outcomes. The costs of PD and the time spent on it vary. One study estimated that teachers spent approximately 10 percent of their time in PD, while school districts spent 5 to 11 percent of the budgets on teacher PD, translating to approximately \$18,000 per teacher (range: approximately \$13,000 to \$25,000; $n = 3,128$ teachers, 127 administrators; seven types of budgetary data) (TNTP, 2015).

Given the frequent inclusion of PD in school improvement strategies, a growing body of research has focused on its associated costs. However, the existing literature provides only sparse information on the costs of PD for school principals, since most studies focus on the costs of PD for teachers.

To address this gap, the present study reviewed lessons learned from the existing research on the costs of teacher PD and applied these insights to the costs of PD for school principals. The key findings from the literature review were then used to develop a better understanding of principal PD costs. Although the goal of this study was not to identify what constitutes effective PD, the key elements emphasized in the literature as effective for teacher PD have been highlighted to guide and inform the discussion on how to consider PD costs for principals.

Significance

To better understand how federal funds were used to support school principals, McCauley (2023) examined how emergency-use funding issued during the COVID-19 pandemic was allocated to enact leadership and equity-driven initiatives nationwide. This study highlighted a survey conducted across U.S. districts and analyzed its findings, which included data from more than 800 school districts and represented approximately 13,000 students. The results suggested that a high percentage of responding districts were using COVID-19 relief funds to support PD and improve the equity leadership skills of all principals across low-performing schools (McCauley, 2023).

Furthermore, the study found that several districts were using the funds to support PD aimed at improving the effectiveness of principals in low-performing schools, in addition to other principal development initiatives (McCauley, 2023). The analysis

not only showed that PD was taking place across many districts, but also that significant funds were being used to support these efforts. Consequently, the study underscored the importance of understanding how school districts allocate funds for principal PD.

Despite highlighting the significant funding used to support principal PD, the study did not address how PD might be perceived in the districts, nor how districts should make decisions about using funds to support principal development. The present study aims to address these questions by highlighting the key elements of PD for principals, drawn from the literature on teacher PD.

Methodology

This study reviewed the extant literature on PD that included strategies for principals working in urban environments. The following keywords were used to search peer-reviewed journal articles published in the past 30 years (1994–2024): Professional Development for Principals, Professional Development for Teachers, Professional Development and School Leadership, Professional Development Costs, Paying for Professional Development in Schools, School Leaders Professional Development Costs, and Costs Associated with Professional Development of Teachers. The resulting thousands of articles were screened and extracted to narrow the study's focus to only empirical studies highlighting effective PD for teachers and school leaders. These articles were then imported into Covidence (Covidence Systematic Review Software, 2019) for a second screening, with duplicate items removed. The remaining articles were screened against the title and abstract. Considering the topic's growth in the research space, a decision was made to expand the review to include publications that had appeared in the past 40 years. This was due to the researcher's interest in building a thematic review that could be used to determine the way in which various studies—those on funding for PD, school leaders, and teacher PD and learning—converged and diverged, rather than constructing a historical review that would involve examining several decades of literature. While reviewing, the researcher looked closely for patterns that emerged within, between, and across the articles. The focus was therefore on both micro- and macro-level findings and insights to identify themes across the literature.

The initial review covered more than 30 articles and essays, as well as empirical studies on PD for teachers and the associated costs. To clarify what constitutes PD and identify the appropriate funding category that would help determine spending on principal PD, additional empirical studies examining methods for determining the effective costs of teacher PD were reviewed. Finally, insights from the literature on teacher PD and its associated costs were used to develop principles to enable a better understanding of the costs of PD for principals.

Several databases, including Google Scholar, Education Resources Information Center (ERIC), JSTOR, PubMed, EBSCO, and ScienceDirect, were searched. The researcher noted that much of the targeted review referenced articles, publications and germinal readings, including books and policy briefs related to costs associated with PD for teachers and school leaders, as well as school funding for PD. The readings became central to this review; rather than relying on them as secondary sources, the

researcher examined and incorporated them to help refine and build on the established themes. Several key research and conceptual articles were also included in this analysis. These readings were especially important to include when: a) a theme emerged that was underdeveloped due to ongoing funding landscape changes (e.g., school finance lawsuits or shifts in federal policy); or, b) authors included in the scope of this research continued to draw on literature predating the specified time-frame (e.g., Little, Gerritz, Stern, Guthrie, Kirst & Marsh, 1987).

Although conceptual and commentary articles were included, the overall aim of this review was to synthesize empirically based articles. The original review included 30 articles, with the expanded review analyzing approximately 45 manuscripts, books, and reports. Once again, sources relevant to the research questions were selected, then analyzed them by identifying key concepts, themes, and conflicts to uncover lessons or principles. For example, recent research surrounding costs associated with PD for teachers was emphasized. Cost analysis research was drawn from the aforementioned academic databases (Google Scholar, PubMed, etc.). The initial list of potential sources underwent a preliminary review based on titles and abstracts to filter out irrelevant works. The remaining sources were then examined in depth to determine their alignment with the research questions, the presence of supporting evidence, and any indications of bias based on the publisher. Finally, lessons learned or principles were extracted by reviewing each study's goals, methodology, and key findings/arguments in relation to the research questions.

Defining PD, what works, and its impact

From practice, we have learned that PD can involve several aspects. Mitchell (2013, p. 390) defined PD as “the process whereby an individual acquires or enhances the skills, knowledge and/or attitudes for improved practice.” For a number of years, PD typically consisted of district- or school-sponsored full- or half-day workshops and lectures held several times a year, supplemented by the limited participation of individual teachers in professional conferences, courses, and other activities offered by various sponsors (Corcoran, 1995a, 1995b; Little, 1989, 1993). However, since the early 1980s, school reform strategies have evolved and teacher PD has garnered increasing attention (U.S. Department of Education, 1998). In the 1970s and 1980s, most PD activities took the form of workshops, conferences, university courses, or lectures conducted by “experts” (Collinson & Ono, 2001). Darling-Hammond and Richardson (2009) referred to this approach as the “drive-by workshop model”—a model that came in for some criticism, most notably from Fullan:

Nothing has promised so much and has been so frustratingly wasteful as the thousands of workshops and conferences that led to no significant changes in practice when the teachers returned to their classrooms (Fullan, as cited in Collinson & Ono, 2001, p. 230).

Research has shown that traditional forms of PD rarely lead to substantial changes in instructional practices or student outcomes (Desimone, Porter, Garet, Yoon & Birman, 2002; Garet, Porter, Desimone, Birman & Yoon, 2001; Harris & Sass, 2011; Hill, 2015; TNTP, 2015). Moreover, a meta-analysis suggests considerable variation in the impact of PD, depending on the professional workshop design

(Basma & Savage, 2018). Contemporary approaches to traditional PD include comparing the number of direct contact hours with participants with the historical method of a one-to-three-hour lecture, which is sustained through a series of workshops (Desimone & Garet, 2015; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). For example, although relatively few studies have demonstrated the impact of coaching, several school districts have added a coaching component to their PD strategies in the form of a change coach or, more frequently, a content coach (Neufeld & Roper, 2003).

What works in PD?

Research shows that teachers currently spend an average of 10.5 days per year attending courses, workshops, conferences, seminars, observation visits, and other types of in-service training (Sellen, 2016). A substantial body of research on improving school performance places strong emphasis on capacity building and school contexts. Capacity building in particular significantly affects achievement of the desired results, as a lack of capacity can prevent schools from sustaining any improvement efforts that lead to improved student outcomes (Hopkins & Reynolds, 2001). Harris (2011) underscored the importance of deliberate, purposeful, and targeted capacity building for realizing initiated change. Capacity building also included fostering teacher motivation. Multiple literature reviews have emphasized the importance of developing teachers' motivation to participate in PD (Dunst, Bruder & Hamby, 2015; Kennedy, 2016; Timperley, Wilson, Barrar & Fung, 2007). Quantitative studies and meta-analytic reviews of general training literature further support the claim that motivation is a key moderator of whether training translates into practical changes (Grohmann, Beller & Kauffeld, 2014; Reinhold, Gegenfurtner & Lewalter, 2018).

Collaborative PD and inquiries

In recent years, the global trend has moved away from the fragmented workshop approach to PD to a community of practice models based on collaboration and a commitment to ongoing learning (Wei et al., 2009). The literature shows that collaborative PD has helped administrators more aptly meet their teachers' needs, as their learning has enabled them "to provide more informed support" to their faculty (Hilton, Hilton, Dole & Goos, 2015, p. 12). Collaborative PD has enabled school leaders to understand how teachers are involved in school leadership teams (Rieckhoff & Larsen, 2012), while project-based learning has been shown to enhance principals' ability to "critically reflect on assumptions" and build capacity in others by learning to distribute leadership and trust their faculty teams (Andreoli, Klar, Huggins & Buskey, 2020, p. 535). In a study by Underlie et al. (2020), the researchers found that developing an action research process involving collaborative school leaders could lead to a deeper examination of school problems, encouraging a focus on the underlying causes rather than just surface-level issues. Underlie et al. (2020) also observed that in rural, high poverty schools in the South, Andreoli et al. (2020) demonstrated that school leaders involved inquiry-based learning projects were able to recognize and tackle issues related to their practices. Moreover, a study by Mahfouz (2018) on district-supported training programs revealed that these in-

initiatives enhanced self-awareness and self-reflection among school leaders, suggesting that such programs can elevate and improve their leadership skills. Additionally, it has been demonstrated that leaders' informal learning can also benefit stakeholders. Bickmore (2012) proposed that learning experiences integrated within the school environment offered principals the time and interactions needed to understand teachers, students, and the specific contextual needs of the school.

Impact of PD

Discerning the impact of PD on student learning is generally complex (Wallace, 2009). Studies have suggested a link between changes to teachers' classroom practices in response to PD and students' academic performance (Garet, Cronen, Eaton, Kurki, Ludwig, Jones, Kazuaki & Falk, 2008; Sanders & Rivers, 1996). Garet et al. (2008) pointed to the evidence of effective PD and students' academic performance, as there had been several attempts to understand the approaches to PD that were more impactful than others. For example, the evidence suggests that coaching has generated mixed results. A large-scale study focused on expert coaching for teachers showed that the presence of classroom coaches did not significantly impact students' reading performance (Garet et al., 2008). A smaller study on reciprocal peer coaching for teachers reported that students from classrooms without coaching made greater progress than those with coaching (Stichter, Lewis, Richter, Johnson & Bradley, 2006). However, in another study centred on a mathematics coaching project, the authors found coaching to have a significant positive impact on student achievement (Campbell & Malkus, 2009). These findings suggest that the association between classroom coaching and student outcomes is inconsistent and may not necessarily lead to positive impacts on academic achievement.

The inconsistent findings reported in the studies on mathematics projects and peer coaching for teachers are not unusual (Borman & Feger, 2006). Several instances, including low-test scores, poor graduation rates, and other indicators of poor student performance, underscore that coaching or other aspects of PD may not bring about the expected outcomes.

Importance of school leaders and collaborative PD

There are increasing insights into how school leadership affects school quality and development. Furthermore, leadership is widely recognized as being second only to classroom teaching in terms of its impact on student learning (Leithwood, Harris & Hopkins, 2020). This knowledge reinforces the importance of PD among school leaders. Bush (2018) argued that acquiring leadership skills should be a deliberate rather than an incidental process. Research has found that high-quality professional learning opportunities for principals—including preparation programs, induction supports for early-career principals, ongoing training, one-on-one support through coaching and mentoring, and peer networks—can build leadership capacity (Jacob, Goddard, Kim, Miller & Goddard, 2015; Mitgang, 2012). Ongoing learning for administrators has been shown to help school leaders not only in terms of introducing positive organizational changes, but also of enabling them to make those changes sustainable (Rieckhoff & Larsen, 2012). Moreover, school leaders' learning can im-

prove schools inasmuch as it is often “a conduit for extending development to others” (Cardno & Youngs, 2013, p. 267).

Review of the literature on PD costs

Several studies have shown that spending on PD typically exceeds expectations (Corcoran, 1995; Killeen et al., 2000; Little et al., 1987; Miles & Hornbeck, 2000). A review of the current literature on PD expenditures suggests a considerable variation in district operating budgets, ranging from roughly 1 percent to more than 8 percent (Miles et al., 2003). Given the emphasis that school districts place on teacher PD, it is unsurprising that much of the research focuses on its costs. Drawing on federal resource allocation patterns, a growing number of recent studies indicate that districts rely heavily on non-local funding sources to pay for teacher PD. Miles, Bouchard, Winner, Cohen & Guiney (1999) and Elmore & Burney (1999), in their respective studies conducted in Boston and New York, found that federal resources contributed significantly to financing teachers’ professional development. In Boston, federal resources comprised 32 percent of PD spending for teachers, whereas local sources provided 45 percent, with the remaining 23 percent coming from state and private sources (Miles et al., 1999). In New York District 2, federal funding, primarily Title I, covered 68 percent of all resources dedicated to teacher PD (Elmore & Burney, 1999). In addition, Hertert (1997) found that resource allocation for PD activities was split almost evenly between state and local authorities—with the state offering 46 percent and local authorities, 48 percent—and suggested that federal resources covered the remaining 6 percent. Moreover, the U.S. Department of Education (2022) reported that PD was the most common use for federal funds, even though those funds could be directed toward other initiatives to improve educational quality. The report showed that in 2020–2021, school districts spent \$1 billion of federal money on PD.

Costs determined

Studies on the costs of PD have defined PD spending differently, with several of these sources drawing on district or state spending reports, making definitive comparisons across districts impossible. Moreover, none of the existing studies has systematically captured the targets, purposes, or organization of PD activities. Odden, Archibald, Fermanich & Gallagher (2002) addressed the lack of knowledge on the costs of various types of PD, highlighting several studies that had attempted to capture PD expenditures by conducting detailed analyses of district-wide activities. For example, their review of the 1987 study by Little et al. on staff development in California showed that, on average, PD expenditure equaled approximately 5 percent of total classroom costs, or \$4,600 per teacher (\$6,973 in 2000 dollars). According to Odden et al., the estimates provided by Little et al. included two items—uncompensated teacher time and salary increases resulting from credits earned through PD—that are normally not included in such studies and that substantially increased the estimated PD expenditures.

Odden et al. (2002) also analyzed the study by Miles & Hornbeck (2000) to identify PD expenditures across four urban districts. The latter had found that school districts spent between 2.4 percent and 4.3 percent of their operating budgets for

PD, excluding the cost of contracted in-service learning days. When these costs were included, the range increased to 2.4 percent to 5.9 percent, or from \$2,010 to \$6,628 per teacher (Odden et al., 2002, p. 6). Furthermore, most estimates suggest that school district PD spending ranges from 2 to 4 percent of a district's total budget (Miles et al, 2003). However, each study defines PD spending differently, and many use district or state expenditure reports, making definitive comparisons across districts impossible.

Why the lack of research

There is a distinct lack of research on PD-related expenditure. In their study on costs associated with teachers' PD, Miles et al. (2002) wrote the following:

There are several reasons for the lack of spending on PD:

1. Since districts fund professional development from a variety of sources with different accounting requirements, districts frequently underestimate their own level of spending.
2. Definitions of professional development vary significantly. The variations cause dramatic differences in spending estimates and make interpreting findings across studies complicated, at best.
3. Current accounting systems are designed to facilitate reporting and accountability, not to provide good descriptions of expenditures and their effectiveness.

To date, significant research has sought to identify teacher PD costs and analyze expenditure patterns. Odden et al. (2002) noted that these costs include spending by schools and/or districts and highlighted three major limitations of previous research on PD expenditures:

- Used data from school district budgets and fiscal accounting records.
- Using different frameworks to capture PD expenditures made fiscal estimates widely different and incomparable.
- Data collected only at the district level underestimated PD expenditures. (Odden et al. 2002, p. 57)

Barrett and Pas (2020) conducted a cost analysis of traditional PD and coaching structures in schools, examining teacher PD costs. Their analysis sought to understand the costs per educator per direct contact hour for traditional PD workshops and coaching, comparing the costs of enhancing the same explicit instruction and engagement strategies through these two mechanisms. The study also provided a starting point for researchers and practitioners considering the costs associated with PD. Results indicated that coaching was only slightly more expensive per educator than traditional PD workshops. The analysis focused on data from the 2017–2018 academic year of a regional education service agency (RESA), which had provided PD training to 13 public school districts. Outcomes varied across districts in terms of geographic location, student demographics, and academic achievement. The analysis of traditional PD showed that the participants were personnel from the RESA and local school districts, with 118 educators attending workshop #1, 105 attending workshop #2, and 141 attending workshop #3 (Barrett & Pas, 2020). Each workshop was held for one day at local meeting spaces available for public use; none were held during the pre-allocated time for teachers' PD (e.g., early release days).

Additionally, the study identified that the cost of each structure depended on the perspective of the analysis. From the regional providers' perspective, for example, coaching was 2.5 to 3.5 times more expensive than traditional PD, for which districts incurred the bulk of the costs.

Barrett and Pas (2020) also reviewed the costs associated with personnel, travel, presenters, facilities, materials, and other opportunities. Only costs that occurred above and beyond business-as-usual without a PD structure (i.e., incremental costs) were considered (Barrett & Pas, 2020; Belfield, Bowden, Klapp, Levin, Sand & Zander, 2015). When determining costs, the researchers noted the need for providers and schools to determine PD content and structure (e.g., traditional workshops or coaching). A cost analysis of traditional PD and coaching structures showed that organizing workshops cost between \$829.77 and \$929.72 per educator, or between \$138.29 and \$158.85 per educator per hour (Barrett & Pas, 2020). These costs would appear to include teacher time spent in meetings with the coach, co-lesson planning with the coach, and coaching sessions with peer teachers. Observations were excluded from teacher personnel costs, as a teacher would provide lessons regardless of coaching implementation. Direct contact hours were calculated by adding the total hours during which coach and teacher were engaged in activities required for coaching, primarily the six activities described earlier. Coaches' wages were determined based on the average salaries provided by their RESA departments; teacher coaches' wages were based on union-negotiated rates.

Essentially, a district or school regards PD as a critical factor. Poekert (2012) viewed teacher leadership as a form of job-embedded PD and argued that teachers should be developed as leaders, which could enhance student achievement and develop school capacity, thereby connecting teacher leadership, PD, and school improvement. DuFour and Eaker (1998) emphasized that school leaders should be attentive to PD content, i.e., the specific skills and knowledge teachers could acquire through PD initiatives. They further suggested that school leaders should consider the importance of the PD process—the strategies that allowed personnel to gain the intended knowledge and skills (p. 52).

The use of frameworks as a guide

Previous research has shown that districts fund PD through multiple sources, which complicates expenditure tracking (Elmore & Burney, 1997; Hertert, 1997; Miles, et al., 1999; Miller, Lord & Dorney, 1994). To better capture the costs associated with teacher PD, researchers have developed multiple approaches and frameworks over the years. Odden et al. (2002) synthesized findings from Garet et al. (1999), Elmore and Burney (1997), and Jennifer King Rice (2001) to create a systematic framework for analyzing PD costs. This framework, which consisted of six core elements—1) teacher's time, 2) training and coaching, 3) administration, 4) materials, equipment, and facilities, 5) travel and transportation, and 6) tuition and conference fees—and two operational core elements, was designed to provide detailed guidance on how PD funds might be allocated.

A case study by Archibald and Gallagher (2002) used this framework to examine one school district's efforts to improve low student achievement. It analyzed spending

at both the school and district levels, as well as reviewing the spending patterns across federal, state, and local resources that aligned with the framework. The study showed high PD expenditure per teacher at the district and school levels, which exceeded the spending reported in other studies (Archibald & Gallagher, 2002).

The second finding focused on how resources were spent; according to Archibald and Gallagher, the framework provided the necessary insights for this purpose, revealing that the largest share of PD funds supported common planning time for teachers—i.e., the time allocated to PD on a regular school day. The second-largest portion went into training and coaching, while the highest portion was used to pay five full-time, on-site instructional facilitators.

In analyzing spending patterns not only at the district level, but also at the school level, Archibald and Gallagher (2002) offered important insights into PD expenditures. While this additional approach likely increased the PD spending estimates, it also provided a clearer picture of collective PD spending for teachers as well as the strategic allocation of resources.

Understanding and capturing the costs for PD

The previous section highlighted the difficulty of identifying the costs associated with PD. Although there are several iterations of PD, prior research has outlined the differences in how PD is defined, emphasizing the core challenge of understanding how much school districts invest in this area. Moreover, research has documented the challenges of tracking these costs and determining which elements should be monitored at the district and school levels. Existing frameworks may assist school districts in identifying the costs associated with teachers' PD. The analysis of PD impacts has shown varied outcomes, and evidence suggests that school districts typically spend more on PD than is estimated. Therefore, the present study supports the need to understand the impact of PD, which can inform more effective monitoring of resource allocation. As such, lessons can be drawn from the frameworks and literature on school principals, as the cost structure provides a way to identify, calculate, and analyze the PD resources allocated to principals. Based on the findings of the present study, the following set of principles has been prepared for the consideration of districts seeking to capture the PD costs for principals.

Principle #1: Create a common definition of what constitutes PD. The definition of PD varies significantly in the literature; the resulting uncertainty has complicated efforts to determine the funds allocated for PD. A common definition of what constitutes professional development for school principals will ensure that costs are targeted.

Principle #2: Determine how much the district and/or school is willing to spend or provide estimates of PD. Based on the literature, districts and schools can better understand spending by creating budgets through intentional planning. Budgets that explicitly model the costs of principal PD will help ensure fidelity, thereby significant impacting resource allocation.

Principle #3: Align PD costs/spending with the common definition of PD. The literature emphasizes that PD costs must correspond to a clear definition of professional development. Districts should develop a strategy to ensure that PD costs

support PD goals, reviewing expenditures quarterly to maintain their alignment with both the goals and definition of PD. Funding should be suspended immediately in those areas where PD spending does not align with PD goals.

Principle #4: Determine PD delivery modes. Research supports the need to select PD approaches that align with the goals of a district and/or school. Identifying the delivery mode ensures that PD costs correspond with the intended outcomes. Key considerations can include whether the PD will involve workshops or coaching, the number of participating principals, and the associated budgetary implications—for example, travel to and from the workshops, becoming a part of the network, or invited external speakers. Where coaches are used, districts must determine how many coaches are needed and whether they will be sourced internally or externally. For external personnel, costs may include consultant time, which may involve not only personal time, but also time for daily activities such as coaching logs, travel, and other related costs. Determining PD timing and frequency will also have implications for resource allocation. Unlike teachers, principals do not limit their contractual time; nonetheless, they do experience time constraints and often have no allowance for PD or planning time in their contractual schedules.

Principle #5: Use a framework to capture costs at the district and school levels. A framework is essential for systematically assessing the costs of PD programs and tracking expenditures. If a suitable framework is not available, then school districts should carefully select the categories associated with PD costs. A cost structure simplifies the process of identifying, calculating, and analyzing PD resources. The previous example, which applied to teachers and was based on six core elements, could be adapted to account for principals' time.

Principle #6: Evaluate the effectiveness of PD. Assessing the impacts of PD is challenging, given the variation in content focus, methodological quality, and the inclusion of standardized assessments to measure student outcomes (Basma & Savage, 2018). Despite the promising effects of teacher PD when content and structure are determined through highly controlled studies, few researchers have documented positive outcomes when these elements are established by practitioners. To address these challenges, districts should implement a process to better understand how PD influences principals' behaviours and practices.

Conclusion

The principles outlined in this work build on lessons learned from teachers' professional development, but the research on the professional development of principals remains limited. Planning for principal PD is complex due to school needs. For example, urban schools and their communities typically reflect historically distant or disconnected relationships, which may stem from distrust, a limited understanding of community structure and power, or traditional dynamics between school leaders, parents, and community leaders (Khalifa, 2012). Charles Payne (as cited in Comer, Haynes, Joyner, & Ben-Avie, 1999) identified five impediments to transforming urban schools: a) social infrastructure, b) building-level politics, c) instructional capacity, d) environmental turbulence, and e) structure of support for implementation. Within the first two categories, Payne highlighted such issues as distrust and

social barriers among parents, teachers, and administrators; racial and ethnic tensions; and adherence to the established patterns of power and collaboration. These factors suggest that PD needs may differ across contexts, thereby affecting costs.

Furthermore, the increasing challenges faced by school leaders in public education are well documented. For urban principals, these challenges include family and community shifts that place additional stress on students; competing demands on learning time from factors both within and outside of school; and instructional practices that fail to meet the growing knowledge demands of a rapidly changing society (Grogan & Andrews, 2002; Kimball & Sirotnik, 2000). In addition, evolving educational accountability requirements have significantly impacted the principal's role. Furhman (1999) noted that accountability legislation focused on student achievement—targeting individual schools rather than entire districts—and carried consequences for implemented actions, including rewards for meeting targets or penalties for lack of progress. In a context of constrained resources, it is critical for schools and districts to develop better strategies for understanding, planning, and effectively allocating funds for PD, given the growing complexity of their principals' roles.

While this article aims to help schools and districts better understand spending costs surrounding principle PD, more is needed. Future studies should refine cost analysis methodologies, measure indirect costs, link expenditures to outcomes, and compare costs across different professional development models. Additional knowledge is also needed about design-based and learning approaches for leaders as well as the resources required to ensure the success of these initiatives.

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