Executive Leadership in School Improvement Networks: 
A Conceptual Framework and Agenda for Research

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The purpose of this analysis is to improve understanding of executive leadership in school improvement networks such as those supported by comprehensive school reform providers, charter management organizations, and education management organizations. While they have potential to improve educational opportunities and outcomes for large numbers of students, researchers have yet to explore systematically the work of executives in establishing, managing, and sustaining school improvement networks. In this analysis, we review the literature on school improvement networks and executive leadership. Further, we draw on research in organization and management to develop a conceptual framework to structure initial, exploratory research. Finally, we propose a research agenda aimed at comparing executive practice, knowledge, and learning (a) within different types of school improvement networks (e.g., CSRs, CMOs, and EMOs) and (b) between networks and institutionalized education agencies (state, regional, and local).

Keywords: educational leadership, executive leadership, networks, educational reform networks, scale up, sustainability, comprehensive school reform, charter management organizations, education management organizations

Over the past two decades, large scale education reform has emerged as a pressing problem of education policy: moving beyond "boutique" initiatives to solutions with potential to effect coordinated improvements in leadership, instruction, and student achievement in large numbers of schools. Over that same period, school improvement networks have emerged and gathered support as one possible solution to that problem. These networks function as de facto educational systems in which nongovernmental organizations collaborate with schools to enact common designs for school-wide improvement.

A problem, however, lies in weak understandings of executive leadership in the central, hub organizations of these networks. School improvement networks depend on executives who can establish, manage, and sustain new types of educational systems absent institutionalized authority or funding. In principle, the goal of these new educational systems would be to enable academic success that has been difficult to attain in the K-12 public school system. To achieve that goal, these new educational systems would be anchored in cultures of responsibility and possibility, and they would be structured to support the continuous evaluation and improvement of instructional and leadership practice in ways uncommon in the K-12 public school system.

Creating, reforming, and leading such educational systems is historically novel work. Until the advent of the standards-based reform movement, system-level
Even so, researchers have yet to investigate systematically the practice, knowledge, and learning of executives in order to understand differences (a) among executives in different types of school improvement networks or (b) between network executives and executives local, regional, and state education agencies. Weak understandings, in turn, inhibit efforts to support the professional development of network executives, the assessment of executive capabilities as a condition for funding, and the evaluation of executive capabilities as being on the effectiveness, scale, and sustainability of networks. Weak understandings also inhibit efforts to develop a positive, reciprocal exchange of leadership knowledge and practices either among school improvement networks or between networks and the K-12 public school system. These problems, in turn, function as limiting conditions on efforts to create, reform, and lead educational systems that value and seek to improve practice and achievement, whether in school improvement networks or in the K-12 public school system.

The purpose of this analysis is to develop a conceptual framework and agenda for research aimed at improving understandings of executive leadership in school improvement networks. Our goal is to motivate and to expand conversation among researchers, reformers, policymakers, and philanthropists about what we argue is an essential-but-overlooked dimension of large-scale education reform.

Our analysis is structured in four parts. We begin with brief reviews of school improvement networks as a reform strategy and, then, of executive leadership in school improvement networks. We continue by drawing from the literature on organization and management to propose a conceptual framework to structure initial research on executive leadership in school improvement networks. We conclude by sketching the broad parameters of an agenda for exploratory, comparative research on the practice, knowledge, and learning of network executives.

School Improvement Networks

For purposes of this analysis, we define school improvement networks as enterprises that feature a central, "hub" organization that develops a school-wide model for improvement and, then, collaborates with "outlet" schools to replicate, use, and refine the model over time (Glazer & Peurach, in press; Peurach & Glazer, in press). Hubs are typically non-profit or for-profit organizations operating outside the formal system of education governance. Outlets can be new and/or existing schools. Hubs and outlets are linked into coherent networks via common goals, norms, language, structures, technologies, and (especially) practices.

Examples of school improvement networks include comprehensive school reform programs, charter management organizations, and education management organizations. Some networks advance school-wide designs that target single content areas in particular types of schools: for example, Success for All, a comprehensive school reform program designed to improve reading achievement in high poverty elementary schools. Others advance school-wide designs that are more comprehensive in their academic focus and in their targeted schools: for example, the International Baccalaureate, a program that provides school-wide designs for improving achievement in core content areas in elementary, middle, and high schools. The resulting school improvement networks function as de facto educational systems that operate within (and in interaction with) the broader system of U.S. public education. The "hub-and-outlet" structure of these networks also differentiates them from other educational networks in which schools collaborate directly with each other to share solutions and practices absent a common, school-wide design or a coordinating hub organization. One example of this sort of "hub-less" network is International Networking for Educational Transformation (iNet), an initiative originally established in the United Kingdom in 2004 that has since grown to include 5600 schools in 35 countries (iNet, 2011).

Public and Private Support

Since the late 1980s, steady streams of public and private funding have provided billions of dollars in support of school improvement networks. An early and continuing source of support is funding for school-wide improvement under Title I of the federal Elementary and Secondary Education Act. Other funding streams have included the New American Schools initiative; the Obey-Porter Comprehensive School Reform Demonstration Act of 1997; the No Child Left Behind Act of 2001 (which incorporated Comprehensive School Reform as a new program); the NewSchools Venture Fund; and large-scale grant programs by the Bill and Melinda Gates Foundation, the Walton Family Foundation, and other philanthropic organizations (Peurach & Glazer, in press).

Both public and private investments appear likely to continue for the near future. For example, one of four federally supported "turnaround" options for underperforming schools is to enlist in a charter school network (Duncan, 2009). Further, under the federal Investing in Innovation (i3) program, two of the four largest, $50 million, five year scale up grants were awarded to organizations operating school improvement networks, with 20% matching funds provided by private donors: the Success for All Foundation, a provider of comprehensive school reform programs, and the Knowledge is Power Program, a charter management organization (U.S.
Department of Education, 2010a). Still further, the Bill and Melinda Gates Foundation has begun to support districts and charter networks in collaborating to use school-wide models to improve or replace underperforming public schools (Gates Foundation, 2010).

**Potential Advantages**

Extensive support for school improvement networks is predicated, in part, on their arguable potential to provide schools and districts with access to established, proven organizational models that can be adopted and used quickly, widely, and effectively to improve leadership practice, instructional practice, and student achievement. A useful analogy is that of franchise-like organizational replication in the commercial sector (Bradach, 1998). Such arrangements are argued to support economies of scale by centralizing design responsibilities in the hub organization, thereby reducing the need for "from scratch" organizational design, development, and refinement in outlets.

However, research on organizational replication in the education and business sectors suggests another possible advantage: the potential of school improvement networks to function as contexts for distributed, collaborative learning among hubs and schools (Peurach & Glazer, in press; Winter & Szulanski, 2001; Zollo & Winter, 2002). In effect, school improvement networks have potential to function as knowledge-producing enterprises, with hubs and schools collaborating to develop, refine, evaluate, and propagate coordinated, enterprise-wide "best practices" that show positive effects on student achievement. Leveraging this potential is central to efforts by the Carnegie Foundation for the Advancement of Teaching to explore a new, entrepreneurial approach to design, educational engineering, and development in the U.S. (Bryk, Gomez, & Grunow, 2010).

**Successes and Problems**

As a policy solution, school improvement networks have seen instances of success. For example, in a longitudinal analysis of three leading comprehensive school reform programs, two of the programs (Success for All and America's Choice) were found to produce significant, positive program effects on leadership practice, instructional practice, and student achievement in those curricular areas for which the programs provided two key sources of support: (a) extensive, detailed guidance for practice; and (b) extensive, practice-based learning opportunities for teachers and leaders (Camburn, Rowan, & Taylor, 2003; Correnti, 2007; Correnti & Rowan, 2007; Rowan, Correnti, Miller, & Camburn, 2009a, 2009b; Rowan & Miller, 2007). Moreover, the programs achieved these effects in state-sized networks of schools: a peak of over 600 schools for America's Choice (roughly as many elementary schools as in South Carolina); and a peak of over 1600 schools for Success for All (roughly as many elementary schools as in New Jersey). Other meta-analyses and syntheses of research have also identified instances of positive, significant program effects on student achievement in large numbers of schools (Borman, Hewes, Overman, & Brown, 2003; Borman, 2009).

Even so, research suggests that such success is the exception and not the rule. For example, rather than providing schools ready access to proven programs, research on the New American Schools (NAS) initiative found that the participating comprehensive school reform programs were under constant development and improvement over the entire span of NAS (Berends, Bodilly, & Kirby, 2002). Further, rather than a quick and seamless process, researchers found implementation to be a long-term process of sense-making and co-construction among schools, developers, and other educational agencies (Datnow, 2006; Datnow & Park, 2009). The success of these initiatives, in turn, depended on the co-emergence of capabilities in districts and hubs to support implementation (Berends et al., 2002). Finally, rather than yielding immediate, positive effects, meta-analyses of research on comprehensive school reform found the strongest program effects in schools implementing programs for five or more years (Borman et al., 2003).

Problems of development, implementation, and effectiveness have been matched with normative concerns. For example, some critics have portrayed the large-scale enactment of highly-specified, school-wide designs as a form of top-down, one-size-fits-all reform at odds with traditions of local autonomy and professional control in education (Klugh & Borman, 2006). Such criticism is argued to be endemic to franchise-like enterprises in the non-profit sector, where success often depends on local actors who derive personal benefit and reward from autonomy and agency (Bradach, 2003).

Other critics caution that school improvement networks are part of a "new privatization" of school improvement services in the U.S., with billions of public and private dollars being spent on school improvement absent transparency and oversight (Burch, 2009). Critics express concern that this new school improvement market will be more responsive to principles of competition and consumerism than to principles of student welfare and the public good, with student achievement potentially taking a back seat to increasing the scale of operations or (in the case of for-profit providers) showing positive returns on investment.

**Executive Leadership**

Our operating assumption is that realizing the potential advantages of school improvement networks while managing the potential problems depends, in part, on executive leadership in the hub organizations. By "executive leadership," we mean the work of the person or group of people who bear ultimate responsibility for establishing, managing, and sustaining the hub organization and the network. Responsibilities for executive leadership may rest with initial founders who also maintain operational responsibilities within the organization: for example, the proverbial "mom and pop shop" or the committee of
concerned citizens seeking educational alternatives for their children. Alternatively, responsibilities for executive leadership could conceivably span an array of roles: for example, chief executive officer, president, other chief officers (e.g., chief financial officer, chief operating officer, and chief information officer), vice presidents, directors, board members, and other top managers.

Our operating assumption derives from research on systemic reform in the K-12 public school system: specifically, research suggesting the central role played by superintendents in district-wide reform. With the advent of district-level accountability, the role of the superintendent has been transformed, shifting beyond reform-via-program-adoption to deep engagement in the work of systemic, practice-focused improvement (Anderson, 2003; Elmore, 2000). With that, the responsibilities of superintendents have grown to include an array of key tasks that support school-level improvement: for example, establishing district-wide improvement strategies; establishing organizational and technical infrastructure to support improvement in practice; cultivating an achievement-focused and practice-centered culture of improvement; and constructing coherent, value-added relationships with constituencies and collaborators in the environment of the district (Honig, Copland, Rainey, Lorton, & Newton, 2010; Honig & Hatch, 2004; Rorrer, Skrla, & Scheurich, 2008; Supovitz, 2006).

**Provisional Characterizations**

Provisionally, our conjecture is that the work of network executives is complex and uncertain. From one perspective, the work appears to overlap with that of executives in public educational agencies (local, regional, and state). For example, both groups of executives face policy pressure to produce annual, measurable gains in student achievement by improving instructional and training, and more. Business systems, develop capabilities for program design and training, and more.

Not only is such work complex and uncertain, it is often unsuccessful. Historically, developing alternative systems of schools that break from the institutionalized structure of the U.S. public education system has proven to be exceedingly difficult, owing to problems of power and politics, functional inefficiencies, cultural challenges, and personal burdens and stresses on reformers (Tyack & Tobin, 1994). Further, executives seeking to establish school improvement networks are competing in a broader "school improvement industry" notoriously hostile to innovating organizations in emerging, niche market segments (Rowan, 2002).

**Weak Understandings of Network Executives**

The preceding analysis suggests that establishing, managing, and sustaining school improvement networks places a premium on "executive discretion:" the latitude of executives to act strategically in response to dynamic task environments, exigencies within their organizations, and their own aspirations, visions, and loci of control and influence (Finkelstein, Hambrick, & Cannella, 2009). However, in our review, we were unable to identify a coherent, sustained body of research focused specifically on executive leadership in school improvement networks. Consequently, we know little about the practice of network executives, the knowledge and capabilities needed to successfully enact executive practice, or the ways in which network executives develop their knowledge and capabilities over time. Further, we know little about the differences (if any) between the practice, knowledge, and learning of network executives and executives in public education agencies.

**Research on the Structure and Function of School Improvement Networks**

In our analysis, the most developed line of research on the operation of school improvement networks examines the design, implementation, and scale-up of comprehensive school reform programs. An additional, emerging line of research examines the design, implementation, and scale-up of charter school networks.

Rather than focusing specifically on network executives, these two lines of research provide a broad perspective on the structure and function of school improvement networks as a context for executive practice. Findings from these two lines of research support the conjecture that the work of network executives is complex and uncertain. They also support the conjecture that the work requires both extensive knowledge and continuous
learning.

For example, research on comprehensive school reform suggests that the core, practical work of hub organizations (i.e., replicating a common organizational design across a large number of schools) does not adhere to common understandings of replication as a rational, sequential process of research, development, dissemination, and utilization. As such, the work does not appear amenable to conventional methods of rational management. Instead, researchers have framed the work as a set of interdependent tasks performed and managed simultaneously, in interaction, over time (Glennan, Bodilly, Galegher, & Kerr, 2004; Peurach, 2011). These tasks include designing the core model, developing essential tools and resources to support implementation, recruiting and marketing, monitoring implementation and continuously improving the program, adapting to environmental contexts, obtaining financial support, and building the capacity of the hub organization.

Further, research on comprehensive school reform suggests that the short term operation and long term viability of school improvement networks requires managing a complex set of interdependent relationships within and between four domains: the schools being served, the organizational models and their associated supports, the hub organization, and broader educational environments (Glazer, 2009; Glazer & Peurach, in press; Peurach, 2011). Each of these four domains is a potential source of problems, uncertainty, and turbulence and, thus, a focus of continuous analysis and management. Further, each is contingent on the other, such that problems, uncertainty, and turbulence in any one domain of operations can have profound implications for the others. For example, changes in the strings attached to funding opportunities for school improvement can have implications for the schools eligible to participate in the network, the essential parameters of the organizational model, and the capabilities of the hub organization to adapt the organizational model to adhere to new funding requirements.

Finally, research on comprehensive school reform suggests that school improvement networks are challenged by uncertainty arising from weaknesses in available knowledge. Specifically, this research suggests that highly-developed, school-wide improvement models do not typically exist prior to scaling up school improvement networks; instead, they emerge and develop through the process of scaling up the networks (Berends et al., 2002; Cohen, Gates, Glazer, Goldin, & Peurach, in press; Peurach, 2011). This is, in part, a consequence of generally weak knowledge about the very enterprise to be replicated: that is, coordinated, school-wide practices, technologies, structures, professional learning opportunities, and other supports needed to realize increasing levels of academic success among increasing numbers of students. This is also a consequence of generally weak knowledge about how to replicate complex organizational models quickly and effectively across large numbers of schools. As a result, knowledge of exactly what, how, and where to replicate is argued to emerge through distributed, coordinated, experiential learning among the hub and its schools over time.

The themes of complexity and uncertainty are echoed in emerging research on the structure and function of charter management organizations. For example, researchers have framed the work of scaling up charter management organizations not as a sequential development-and-diffusion process but, again, as a collection of simultaneous, interdependent tasks: for example, creating a growth strategy, monitoring and interpreting environments, developing professional capabilities, crafting a public identity, creating a financial strategy, cultivating relationships, measuring success, and maintaining flexibility (Farrell, Nayfack, Smith, Wohlstetter, & Wong, 2009). Other researchers have reported that this work is complicated by such issues as the complexity needs of the disadvantaged students, problems recruiting and retaining capable teachers, and opposition from organizations and interests in the K-12 public school system (Education Sector, 2009; Lake, Dusseault, Bowen, Demeritt, & Hill, 2010). Particularly problematic is the need to project rationality and efficiency to secure external funding. Doing so often results in a "tyranny of business plans" at odds with the complexity and uncertainty experienced routinely in developing and scaling up charter networks (National Charter School Research Project, 2007).

Broader Research on Replication and Innovation

Findings from research on the structure and function of school improvement networks are consistent with findings from broader research in the commercial sector. For example, leading research on the use of organizational replication to establish franchise-like networks found no evidence that the replication process adhered to common understandings of research, development, diffusion, and utilization (Winter & Szulanski, 2001). Rather, researchers again found that the model to be replicated typically is not known perfectly by the replicator prior to large-scale replication, transfer of the model to outlets is complex and imperfect, and effective implementation typically requires formidable learning. As explained by Winter & Szulanski:

The formula or business model, far from being a quantum of information that is revealed in a flash, is typically a complex set of interdependent routines that is discovered, adjusted, and fine-tuned by "doing." Growth by replicating such a "formula" requires the capability to recreate complex, imperfectly understood, and partly tacit productive processes in carefully-selected sites, with different human resources each time, facing in many cases resistance from proud, locally
autonomous agents. For this reason, replication requires effort and naturally takes time (p. 731).

These findings are consistent with findings from broader research on the process of innovation, itself. For example, findings from a seminal study of the innovation process conducted by the Minnesota Innovation Research Program directly refute the stage-wise innovation model (Van de Ven, Polley, Garud, & Venkataraman, 1999). Instead, researchers described the innovation process as cycles of "divergent" and "convergent" learning co-enacted by developers and users over time. Divergent learning involves experimentation, discovery, and search to expand innovation alternatives. Convergent learning involves trial-and-error testing to design, learn to use, and refine the innovation.

Successful innovation, then, is argued to depend on executives' capabilities to coordinate both "plural" and "unitary" management strategies to motivate, coordinate, and leverage divergent and convergent learning (Van de Ven et al., 1999). Researchers describe this as an uncommon sort of managerial ambidexterity that often functions below executives' level of consciousness. Moreover, executives must manage such learning while simultaneously monitoring, interpreting, and adapting to environmental supports for innovation that are likely co-emerging concurrent with the innovation process, itself: for example, regulations, funding, research, human capital, market incentives, and proprietary activity among competitors and suppliers. In interviews with over 1500 executives in a broad array of industries, researchers reported that more than half of the executives doubted their capabilities for strategic management when faced with such environmental complexity (IBM, 2010).

Executive Leadership: A Conceptual Framework

Thus, while research provides insight into school improvement networks as a context for executive leadership, it provides little specific insight into executive leadership, itself. We continue to know little about the practical, day-to-day work of network executives, the knowledge on which network executives routinely draw, or the means by which they acquire and refine that knowledge. As such, we propose four questions to guide initial, exploratory research on executive leadership in school improvement networks:

1) Practice: What are the critical practices of executives responsible for establishing, scaling up, managing, and sustaining school improvement networks?
2) Knowledge: What knowledge and capabilities are needed to enact those practices successfully?
3) Learning: How do executives acquire and refine this combination of knowledge and capabilities over time?
4) Variation: How do practice, knowledge, and learning vary among executives in different types of school improvement networks (e.g., comprehensive school reform providers, charter management organizations, and education management organizations) and between network executives and executives in institutionalized education agencies (state, regional, and local)?

We continue by drawing from the literature on organization and management to propose a provisional conceptual framework to structure initial, exploratory research (see Table 1, below). The framework is intentionally broad and general, for two reasons. The first is the goal of examining a wide range of practices, knowledge, and learning opportunities potentially instrumental in establishing, managing, and sustaining a diverse population of school improvement networks. The second is the goal of comparing network executives to executives in institutionalized education agencies to identify areas of convergence and divergence in their practice, knowledge, and learning.

Executive Practice

By "executive practice," we mean the day-to-day work of network executives in establishing, managing, and sustaining school improvement networks. For purposes of exploratory, comparative research, we propose examining three categories of functional responsibilities: managerial, social, and strategic. We derive these categories from classic characterizations of organizations as rational, natural, and open systems (Scott & Davis, 2007).

Drawing on the rational systems tradition, "managerial responsibilities" focus on improving efficiency and effectiveness in pursuing diverse (and possibly competing) organizational goals: for example, improving student achievement, increasing the scale of operations, ensuring sustainability over time, and increasing revenues. As such, managerial responsibilities include conventional administrative functions associated with founding, operating, and sustaining organizations: for example, budgeting, finance, accounting, reporting, information systems, human resources, and facilities management. They include operational functions: for example, evaluating the performance of (and external demands on) technical work and, then, adapting and coordinating technologies, structures, and policies both to improve effectiveness and efficiency and to comply with expectations beyond the organization. Finally, they include learning functions: for example, acquiring, developing, and retaining the knowledge and capabilities needed to improve performance, both through evolutionary change in existing domains of operations and through innovation and creative problem solving that deviate sharply from existing ways of working.

Drawing on the natural systems tradition, "social responsibilities" focus on building culture and maintaining relationships both within and beyond the organization. Within the organization, examples of social responsibilities
include articulating a mission and vision, modeling and representing essential norms and values, brokering relationships and information, asserting influence and control, motivating people and securing their commitment, mediating conflicts, and managing organizational politics. Beyond the organization, examples of social responsibilities include maintaining relationships with key constituencies in the environments of the organization (e.g., boards of directors, resource providers, and labor unions); acting as the public face of the organization; and acting as a

Table 1

Conceptual Framework: Executive Practice, Knowledge, and Learning

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Executive Practice</td>
<td></td>
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<tr>
<td>Managerial Responsibilities:</td>
<td>Functions focused on improving efficiency and effectiveness in pursuing organizational goals, including administrative, operational, and learning functions.</td>
</tr>
<tr>
<td>Social Responsibilities:</td>
<td>Functions performed by executives in building culture and maintaining relationships, both within the organization (e.g., articulating a mission and vision, modeling norms and values, and brokering relationships) and beyond the organization (e.g., acting as spokesperson, advocate, and lobbyist on behalf of the organization).</td>
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<tr>
<td>Strategic Responsibilities:</td>
<td>Functions associated with monitoring environmental activity and adapting the organization to maintain legitimacy and viability, including responsibilities for entrepreneurship and innovation.</td>
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<tr>
<td>Executive Knowledge</td>
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<tr>
<td>Disciplinary Knowledge:</td>
<td>Formal knowledge as retained both in the academic literature and in the popular business literature.</td>
</tr>
<tr>
<td>Situated Knowledge:</td>
<td>Knowledge anchored in specific organizational and social contexts, both formal (as retained in procedures, routines, and manuals) and social (as retained in communities of practice).</td>
</tr>
<tr>
<td>Expert Knowledge:</td>
<td>Knowledge, beliefs, and values retained in the minds, habits, and practices of individual executives.</td>
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<tr>
<td>Executive Learning</td>
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<tr>
<td>Early Career Learning:</td>
<td>Formal and experiential learning prior to assuming formal executive roles and responsibilities.</td>
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<tr>
<td>Formal Learning:</td>
<td>Intentionally constructed learning opportunities anchored in conventional educational, classroom, or workshop contexts.</td>
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<tr>
<td>Practice-Based Learning:</td>
<td>Learning opportunities grounded in realities, artifacts, circumstances, and challenges in the day-to-day work of executives, both formal (e.g., coaching and mentoring) and informal (e.g., individual and collaborative reflection).</td>
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Executive Knowledge

By "executive knowledge," we mean the understandings and capabilities that support the enactment of executive practice. For purposes of exploratory, comparative research, we propose three categories of knowledge: disciplinary, situated, and expert.

"Disciplinary knowledge" refers to formal knowledge as captured and represented both in the academic literature and in the popular business literature. Disciplinary knowledge can be theoretical or practical: for example, "the theory of the firm," so central to economists as contrasted with practical strategies for motivating employees. Disciplinary knowledge can also be scientific or pragmatic: for example, the products of formal research as contrasted with "wisdom of practice" published by leading executives. A key characteristic of disciplinary knowledge is that it exists in the public domain and not as the intellectual property of a particular individual or organization.

"Situated knowledge" refers to shared knowledge anchored in specific organizational and social contexts. This includes formal/codified knowledge such as procedures, routines, manuals, and artifacts in particular organizations (Feldman & Pentland, 2003; Nelson & Winter, 1982). This also includes tacit knowledge as represented in the relationships, interactions, and shared ways of working among executives and as retained in communities of practice (Brown & Duguid, 1991; Wenger, 1999, 2008).

"Expert knowledge" refers to knowledge, beliefs, and values as retained in the minds, habits, and practices of individual executives (Mintzberg, 1973, 2005). Expert knowledge can include personal understandings of different categories of disciplinary knowledge and of how to mobilize such knowledge in practice. It can include knowledge of customers, individuals, competitors, history, and other matters that executives accumulate over their careers. It can also include "soft skills" and "managerial competencies." As with all knowledge in organizations, expert knowledge can be tacit or explicit: for example, manifest in personal and taken-for-granted routines as contrasted with personal philosophies of business articulated among colleagues and staff (Brockmann & Simmonds, 1997; Grant, 1996).

Again, while analytically distinct, these domains of executive knowledge are interdependent and likely confounded in practice. As such, knowledge supporting executive practice also includes the meta-capacity to mobilize and to integrate knowledge in all three domains in enacting managerial, social, and strategic responsibilities.

Executive Learning

By "executive learning," we mean the experiences by which executives acquire the understandings and capabilities needed to enact their practice. For purposes of exploratory, comparative research, we propose three categories of executive learning: early career learning opportunities, formal learning opportunities, and practice-based learning opportunities. Yet again, while analytically distinct, these learning opportunities are interdependent and likely to interact over time.

"Early career learning opportunities" describe formal and experiential learning prior to assuming formal executive roles and responsibilities (Melone, 1994; Guthrie & Datta, 1997). Early career learning opportunities can function as a chief means of developing knowledge of the domain of technical activity that executives will ultimately lead: for example, engineering, manufacturing, service provision, etc. They can also function as a chief means of developing knowledge of the organization and management of that activity, as well as a chief means of developing knowledge of the environmental actors on which this activity depends. Early career learning opportunities can also function as a means of developing social relationships and building social capital, as well as a means of developing motivations, values, and standards of performance that ultimately guide executive practice.

"Formal learning opportunities" are intentionally constructed learning opportunities anchored in conventional
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educational, classroom, or workshop contexts. These include graduate classes and executive education provided by universities, as well as executive education provided by professional associations, external agencies, and other sources of "pull out" executive training. Formal learning opportunities function as a primary venue for developing understanding of what we described above as "disciplinary knowledge," as well as a venue for developing knowledge of formal policies and procedures in individual organizations. Through the case method and through role-based scenarios, formal learning opportunities can also function as a context for grounding executive education in authentic problems of practice.

"Practice-based learning opportunities" are learning opportunities grounded in artifacts, circumstances, and challenges encountered regularly in the day-to-day work of executives (Dunbar & Starbuck, 2006; Feldman & Lankau, 2005; Geletkanycz & Hambrick, 1997; Schoen, 1987; Virany, Tushman, & Romanelli, 1992). Practice-based learning opportunities function as a primary venue for developing situated and expert knowledge grounded in specific relationships, organizations, and their environments. Practice-based learning opportunities can arise in the context of formal venues, such as regularly scheduled meetings, working sessions, collaborative projects, and coaching relationships. They can also arise informally through individual and collaborative reflection, executive transitions, board memberships, and other forms of social networking among executives.

Agenda for Research

The preceding analysis provides context intended to motivate concern with executive leadership in school improvement networks. It also provides a conceptual framework intended to guide initial thinking and reasoning about the practice, knowledge, and learning of network executives.

We continue, then, by building on the preceding analysis to propose an agenda for exploratory research on executive leadership in school improvement networks. The agenda heeds the meaning of "social science exploration" advanced by Stebbins (2001): "a broad-ranging, purposive, systematic, pre-arranged undertaking designed to maximize the discovery of generalizations leading to description and understanding of an area of social or psychological life" (p. 3).

In the case of network executives, exploratory research should serve three purposes. The first is to provide descriptive accounts of executive practice, knowledge, and learning in school improvement networks, with the goal of raising awareness and concern among policy makers, philanthropists, and researchers about the need for deeper investigation. The second is to elaborate, refine, and extend the general conceptual framework developed immediately above to ground it more specifically in the leadership of school improvement networks. The third is to develop analytic frameworks for examining variation in the practice, knowledge, and learning of executives: specifically, by comparing different leadership roles within networks, both formal and informal; by comparing executive leadership in different types of networks, including comprehensive school reform programs, charter management organizations, and education management organizations; and by comparing executive leadership in networks and institutionalized education agencies.

Research Method: Case Study

The preceding purposes call for the use of case study as a primary research method. Consistent with criteria set out by Yin (2009), a case study approach would enable in-depth and in-context investigation of executive practice, knowledge, and learning as contemporary and weakly understood phenomena, where the boundaries between the phenomena and its broader context are unclear.

More specifically, the situated nature of executive practice, knowledge, and learning calls for the use of an embedded case study design (Scholz & Tietje, 2002; Yin, 2009). The school improvement network functions as the case. Individual executives would serve as the primary units of analysis, with specific focus on the practice, knowledge, and learning of executives in formal and informal leadership roles. Executives would be situated within "communities of executive practice." Those communities, in turn, would be situated within hub organizations. The hub organizations, finally, would work in interaction with their school-level designs, their schools, and their broader environments.

A single, embedded case study design would create opportunity both to provide descriptive accounts of executive practice, knowledge, and learning and to further develop the general conceptual framework proposed above. However, a multiple, embedded case study design is needed to develop analytic frameworks for examining variation in executive practice, knowledge, and learning by role, by network type, and as compared to executives in institutionalized education agencies. Resource permitting, both single and multiple embedded designs would be strengthened if structured longitudinally, given the long-term work of school improvement networks, likely variation in the relevant work of executives over the course of the school year and over the life of the enterprise, and the dynamic environments in which networks operate.

Case Selection: School Improvement Networks

In selecting cases for investigation, we propose first selecting school improvement networks based on their current stage of development, in order to structure appropriate comparisons. Our assumption is that, over time, school improvement networks progress through a process of maturation and structuration, with executive roles, practices, knowledge, and learning co-evolving with the maturation and structuration of the network. Further, our assumption is that the longevity and continued development of networks function as indicators of progress along multiple dimensions: for example, recruiting or building schools; securing resources; developing the school-wide
model; generating evidence of effective implementation and outcomes; establishing and sustaining a viable hub organization; and managing relationships with broader environments.

To assess a network’s current stage of development, we draw on three categories used by the federal Investing in Innovation program: development, validation, and scale-up (U.S. Department of Education, 2010c). The development phase describes programs fielded in a small number of schools either by an emerging hub organization or a new project team within an existing organization, with the primary goal of establishing proof of concept. Consider a newly founded charter management organization establishing three pilot schools as compared to a district piloting a combination of new programs in a small number of schools (e.g., a curriculum, data warehouse, and teacher-leadership initiative). Such initiatives are likely to be initially supported primarily by grants or other contributions (rather than by institutionalized funding streams).

The validation stage focuses on a set of simultaneous tasks: for example, recruiting additional schools to expand to a district-sized network (e.g., 5-50 schools); developing resources and capabilities in the hub or project team to support larger-scale implementation; formally evaluating implementation and effects on student achievement at scale; and continuing to refine the organizational model. Consider a charter management organization expanding from schools in the single digits to the double digits as compared to a mid-sized district supporting the district-wide implementation of a set of coordinated interventions.

The scale-up phase further extends work initiated in the development and validation stages: for example, continued recruitment and retention; more rigorous evaluations of implementation and effectiveness; continued formalization of capabilities for development, training, and research in the hub or project team; and, possibly, increasing dependence on revenues or institutionalized funding streams (and, with that, decreasing dependence on grants and other contributions). Consider the largest, national school improvement networks (e.g., Success for All and KIPP) as compared to efforts by state education agencies to support improvement in state-wide networks of turnaround schools.

Working within these categories, selecting networks at the development, validation, and scale-up phases would support a "lifecycle" perspective, enabling comparisons of how executive practice, knowledge, and learning vary with the size, maturation, structuration, and legitimacy of the enterprise. Alternatively, selecting networks operating at one particular stage of development would enable comparisons of how executive practice, knowledge, and learning vary among types of hub organizations and between hub organizations and institutionalized education agencies.

Even with careful case selection, establishing appropriate comparisons between hub organizations and institutionalized education agencies may be difficult. For example, it is unlikely that local, regional, or state education agencies are developing and fielding school-wide improvement models. By contrast, it is more likely that these agencies are structuring multi-component interventions for schools, with the individual components developed by external providers. Alternatively, it is unlikely that school improvement networks will be bound by the same geographic constraints as local and regional education agencies, especially as they increase in scale. These differences are potentially consequential, and they must be made explicit and considered carefully in the context of analysis.

**Case Selection: Network Executives**

Regarding selecting individual executives within school improvement networks, we propose a combination of purposive and snowballing sampling (Miles & Huberman, 1994). Initial, purposive sampling would focus on identifying "top management:" that is, executives who initially founded or established a specific network, as well as the current chief executive officer and/or president (if different from the founders). Continued snowball sampling would then focus on asking founders, chief executive officers, and/or presidents to identify additional executive roles and role incumbents that comprise the executive team, as well as individuals within the organization who function in informal, quasi-executive capacities. Thus structured, the combination of purposive and snowballing sampling would support comparisons within and between cases by identifying executives in both similar and different leadership roles.

Available resources would limit the extent of snowball sampling, as would likely changes in the population of executives over time. At the development stages, executives are likely also to enact operational roles within the organization, and many staff members in operational roles are likely to contribute to the performance of executive functions. Beginning at the validation stage and continuing into the scale-up stage, we predict the emergence of specialized leadership roles, growth in the number of executive roles, and the possibility of non-executives continuing to function in quasi-executive capacities (e.g., lead developers, trainers, and/or researchers).

**Sources of Evidence**

The scope of data collection will clearly be limited by available resources. That said, the use of embedded, comparative, longitudinal case study designs calls for the type of broad-based data collection strategies characteristic of organizational ethnography (Brewer, 2004; Fine, Morrill, & Surianarain, 2008; Lee, 1999). These strategies center on participant-observation as an opportunity to generate a rich data set that includes documents, artifacts, field notes, interviews, and possibly even surveys. That, in turn, creates
opportunities to triangulate among multiple sources of evidence to identify points of convergence and divergence in executive practice, knowledge, and learning.

With an embedded case study design, the focus of data collection should vary with the level of analysis (Yin, 2009). For example, given the dynamics of comprehensive school reform networks reviewed above, network-level data collection should focus on four domains, alone and in interaction: the targeted schools, the school-wide model, the hub organization, and broader environments. Possible sources of evidence fall into three primary categories: documents, including program materials, proposals, reports to funders, internal memos and publications, public reports, and media accounts; participant-observation in hub-sponsored training events and school visits; and interviews with developers, trainers, coaches, researchers, and executives in the hub organization. Because program evaluation falls beyond the scope of the proposed research, a key dimension of network-level data collection is to identify evidence of program effects on culture, practice, and (especially) student achievement in such documents as state achievement reports, hub-maintained data warehouses and information systems, and (if available) formal research.

At the intermediate level, data collection should focus on collaborative activity among executives in communities of practice, structured initially (though loosely) by the categories of executive practice, knowledge, and learning proposed above. Direct observation should address formal venues for collaboration such as structured meetings. It should also address informal venues for collaboration such as routine, daily work activities. Direct observation should be complemented by other sources of evidence: for example, meeting agendas and minutes, memos exchanged among executives, email exchanges (if available), joint reports and publications, focus groups, and individual interviews.

At the individual level, data collection should focus on the individual network executive, again structured initially (and loosely) by the categories of executive practice, knowledge, and learning proposed above. A series of in-depth, phenomenological interviews has potential to serve as a primary source of evidence, with the goal of exploring the life history of executives, their immediate work and experiences, and their reflections on themes that emerge through the interview sequence (Siedman, 1991). Again, interviews should be complemented by other sources of evidence: for example, copies of résumés, curriculum vitae, or other professional credentials; direct observation of executive practice; experience sampling; logs of daily practice; and interviews with subordinates about the work of executives.

Analysis

The exploratory nature of the proposed research places a premium on analysis running concurrent with (and informing) data collection. Throughout, analysis should center on conventional methods of within-case and cross-case analysis (Miles & Huberman, 1994). Further, analysis should be both (a) deductive, with a focus on refining provisional conceptualizations of executive practice, knowledge and learning and (b) inductive, with a focus on devising frameworks for examining variation in executive practice, knowledge, and learning within and between cases. Finally, embedded, comparative, longitudinal case study designs create multiple means for establishing the validity of findings: for example, triangulating among different categories of evidence (i.e., documents, field notes, and interviews); triangulating among roles and initiatives; leveraging opportunities to investigate "negative cases" that do not square with emerging categories and themes; on-going member checking; and continued surveillance of the academic literature.

Conclusion

The preceding is a first step toward improving understanding of executive leadership in school improvement networks. We reviewed the literature on school improvement networks, arguing for their currency in contemporary education reform, potential advantages as a reform strategy, and successes and problems in their enactment. We defined executive leadership, reviewed the literature on comprehensive school reform and charter management organizations, and argued that the work of network executives appears to be essential, complex, and uncertain. Working from research on organization and management, we developed a provisional conceptual framework describing the practice, knowledge, and learning of network executives. Finally, we sketched an agenda for exploratory, comparative research that integrates principles of case study, organizational ethnography, and conventional qualitative analytic methods. Throughout our analysis, we emphasized that any characterizations of the context, practice, knowledge, and learning of network executives are provisional: a foundation for research on network executives rather than the product of such research.

Though provisional, our analysis still has potential to function as a platform for broader conversation among researchers, reformers, and philanthropists about the system-level leadership needed to support large-scale education reform, with particular emphasis on improving leadership practice, instructional practice, and (especially) student achievement. This conversation is currently underway around initiatives aimed at supporting the professional development of system-level educational leaders, both in university-based programs (e.g., Harvard University's Doctorate of Educational Leadership) and in foundation-supported programs (e.g., the Broad Residency). One goal is to expand the conversation to include a specific focus on the work of network executives. Another goal is to motivate (and to garner support for) research that can further inform the conversation.

Continued research is imperative. Research such as that which we propose would provide specific insight into the day-to-day work of system-level leaders seeking to
establish achievement-centered and practice-focused education systems. It would provide insight into the complex knowledge and capabilities supporting their work. It would also illuminate the means by which knowledge and capabilities emerge and evolve, both over the professional lives of executives and in interaction with the systems that they lead. Finally, it would create a platform for the reciprocal exchange of leadership knowledge and practice among school improvement networks, as well as between school improvement networks and the K-12 public school system. By contrast, not engaging research such as we propose risks the reform conversation continuing without deep understanding of such matters and without a platform for the reciprocal exchange of leadership knowledge and practice.

1 Under the federal i3 program, school improvement networks were also awarded development and validation grants. At the development stage, network-based initiatives include College Yes, STEM21, COMPASS, L.A.’s Bold Competition, and Schools to Watch School Transformation Network. At the validation stage, network-based initiatives include Programming in the 21st Century High School, the Secondary School Turnaround Model, and the Scaling the New Orleans Charter Restart Model (U.S. Department of Education, 2010a). Twelve additional charter management organizations were awarded a total of $50 million under the federal Charter School Grant Program competition (U.S. Department of Education, 2010b).

2 By way of précis, Scott and Davis (2007) frame early organizational scholarship as focused primarily on the rational management of production-oriented, bureaucratic, and hierarchically-structured enterprises, with particular attention to developing formal structures that increased effectiveness and efficiency (e.g., Fayol, 1949; Gulick & Urwick, 1937; Taylor, 1911). Scholarship expanded to include attention to managing the social and cultural dynamics in organizations (e.g., Barnard, 1938; Mayo, 1945; Selznick, 1957) and to managing the interactions between organizations and their often-uncertain environments (e.g., Pfeffer & Salancik, 1978; Thompson, 1967). There is no evidence of obsolescence: for example, of early concern with rationally managing operations being cast aside in favor of concern with strategizing in complex environments. Rather, research and scholarship continue in all three traditions. In terms of the functional responsibilities of executives charged with leading complex organizational enterprises, the result is very much an “all of the above” situation.

3 For example, consider early efforts focused on developing principles of “scientific management” for solving problems of effectiveness and efficiency in production-oriented enterprises (with the classic case in point being Taylor, 1911). These early efforts had their basis in the field of mechanical engineering, and they deliberately associated managerial knowledge with “science” as a means of legitimizing the knowledge base. These early efforts were followed by efforts to draw from individual disciplines (e.g., psychology, mathematics, economics, sociology, and others) to fashion a formal body of knowledge and curricula of studies supporting executive and managerial practice (Khurana, 2010).

4 The earliest efforts to establish formal learning opportunities for executives began in the late 1800s and the first half of the 1900s with the establishment and proliferation of “masters in business administration” programs in universities (Jones & Zeitlin, 2008; Khurana, 2010). In 1943, the University of Chicago established the first “executive MBA” as a formal learning opportunity designed to accommodate practicing managers and executives (University of Chicago, 2010). In the time since, formal learning opportunities for aspiring and practicing executives have grown into a multi-billion dollar industry (Reingold, Schneider, & Capell, 1999). Providers include universities, companies, and private agencies. Learning opportunities include general management programs, programs tailored to specific roles and specializations (e.g., chief operating officers, marketing directors, etc.), and programs tailored to the needs of individual organizations.

References


Article Citation

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An earlier draft of this paper was presented at the Annual Meeting of the University Council for Educational Administration, New Orleans, LA, October, 2010. The authors gratefully acknowledge support for this research from the Education Policy Center and the College of Education at Michigan State University. The authors also thank Vincent Cho, Sarah Winchell Lenhoff, and anonymous reviewers for their very helpful feedback on earlier drafts.