

Crafting Coherence: How Schools Strategically Manage Multiple, External Demands

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"Policy coherence" is an often cited but seldom achieved education policy goal. We argue that addressing this policy-practice gap requires a reconceptualization of coherence not as the objective alignment of external requirements but as a dynamic process. This article elaborates this re-conceptualization using theories of institutional and organizational change and empirical illustrations from literature on school reform and education policy implementation. We define coherence as a process, which involves schools and school district central offices working together to craft or continually negotiate the fit between external demands and schools' own goals and strategies. Crafting coherence includes: schools setting school-wide goals and strategies that have particular features; schools using those goals and strategies to decide whether to bridge themselves to or buffer themselves from external demands; and school district central offices supporting these school-level processes. This definition suggests new directions for policy research and practice.

School improvement policies converge on urban public schools in ways that paradoxically compromise school improvement—a challenge some have called a heightened state of policy incoherence (Fuhrman, 1993). These schools face a barrage of demands from various sources including federal and state governments, local school boards, unions, and community groups—these demands focus on numerous aspects of schooling including curriculum, uses of time, testing, accountability, management, parental involvement, and professional development (Hill & Celio, 1998). Education policy researchers often frame eliminating policy incoherence as a preferred outcome based on the observation that when multiple external demands converge on schools they compete with each other for funding, time, and attention in ways that have been linked with school mismanagement, poor instruction, teacher turnover, and other measures of weak school performance (Cohen, 1982; Fuhrman, 1999; Shulman, 1983). Even external demands with similar or complementary goals have been associated with these negative results in practice. Some schools respond by adding new positions and programs to handle specific demands, but consequently strain their ability to operate in coordinated and productive ways (Cohen, 1982; Elmore, 1995; Fuhrman, 1999). Researchers have shown that demands converge on frontline workers—teachers, principals, and school staff—who tend to have inadequate resources for manag-

ing them (Hatch, 2002; Knapp, Bamberg, Ferguson, & Hill, 1998; Shulman, 1983).

However, other research suggests that multiple demands may add up to important new opportunities for school improvement. For example, some schools thrive when they seek to implement multiple policies in part because each external demand brings with it additional resources (Hatch, 2004; Newmann, Smith, Allensworth, & Bryk, 2001). When schools compete for and secure funding from particular policy initiatives, their success in attracting those funds may appear as a reward and their participation a source of legitimacy.

This article aims to define policy coherence in a way that takes into account its contingent nature—that the convergence of multiple external demands on schools may or may not contribute to deleterious student performance outcomes—and that accordingly policy coherence is not a inherently positive or negative state of affairs. We argue that coherence might provide a more productive organizing construct for policy if researchers and practitioners viewed it as a process by which schools use multiple external demands to strengthen students' opportunities to learn. This article takes a first step in forging new directions in research on policy coherence by presenting this process-based definition and exploring activities and strategies that this process may include. We base our conception of coherence as a process or craft on reviews of literature related to policy coherence, institutional theories of decision-making, organizational-environmental relationships, and organizational learning as well as selected studies of school reform and education policy implementation. We present results from this review in three sections. First our review of literature on policy coherence in education reveals that reports of the negative consequences of policy incoherence are at least decades old. Policymakers' two major attempts to address these consequences—one from outside schools "in" and one from inside schools "out"—have not alleviated them and in some cases may have made matters worse. We argue that these predominant strategies faltered in part because they reflect a traditional definition of coherence as an objective outcome—as either the external or internal alignment of standards, curricula, assessments, and other, formal policy texts. This traditional definition ignores

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that both schools and agents outside school boundaries—especially school district central offices—have important roles to play in helping schools strategically use external demands to strengthen school performance and overlooks the political and subjective realities of implementation that make such alignment an unrealistic and unproductive goal.

In the second section, we argue for an alternative definition of coherence not as objective alignment but as an ongoing process involving multiple actors both internal and external to formal school systems. We begin to elaborate this process by focusing on two organizational actors that feature prominently in education policy literature on coherence—schools and school district central offices. We argue that this process requires school and school district central office leaders to work in partnership to continually “craft” or negotiate the fit between external demands and schools’ own goals and strategies. We draw mainly on literature on decision-making, organizational-environmental relationships, and organizational learning to elaborate that crafting coherence involves at least three broad activities: schools setting school-wide goals and strategies with particular characteristics; schools using those goals and strategies as the basis for their decisions about the extent to which they might productively engage external demands—a choice we call bridging or buffering; and school district central offices supporting these new forms of school decision-making.

This article contributes to education policy research by elaborating a definition of “coherence”—an often used but under-conceptualized policy goal—and by beginning to specify key dimensions of coherence as a process involving schools and district central offices. Our conceptualization of these activities stems mainly from literature outside education with albeit limited confirmation by empirical literature on schools and school districts. Nonetheless, the definitions and activities elaborated here raise questions to guide further inquiry about coherence in public education arenas and suggests public and private funders might promote coherence by investing in processes that may help schools use external demands productively.

Background: The Persistent Problem of Multiple, External Policy Demands

Scholars long have tied the convergence of multiple external demands on public schools to schools’ inability to help all students achieve high performance standards and have referred to these effects as a heightened state of policy incoherence (Fuhrman, 1993; Hatch, 2002; Newmann et al., 2001). Purported remedies for policy incoherence generally have taken one of two approaches: (a) first-generation systemic and standards-based reforms have addressed the challenge from the point of policy origin—typically in district central offices and state and federal agencies and in other institutions framed in the education policy literature as outside schools; (b) second-generation systemic reforms have focused on solutions within schools. However, neither approach has remedied the deleterious effects of policy incoherence in practice in part because each stems from a limited conceptualization of what coherence entails. However, experience with each approach provides insights that can inform a fuller picture of policy coherence.

Coherence from the Outside In

Systemic and standards-based reform initiatives of the 1980s and 1990s treated policy incoherence as a problem of policy design. These initiatives rested in part on assumptions that external (sometimes called “outside in” or “top down”) alignment of standards, curricula, and assessments by states and districts could help reduce the number of potentially conflicting external demands schools face and focus schools on specific, challenging academic content and performance standards and a vision that all students can learn (Smith & O’Day, 1990).

Research on standards-based reform suggests some implementation successes. For example, the notion that all students can learn has permeated at least policy talk at federal, state, and local levels, and schools and districts nationwide have developed systems of academic performance standards (Goertz & Duffy, 2001). Some school district central offices have taken pro-active roles in helping schools implement standards-based reform by providing assistance with data, professional development, resources for curriculum and assessments, and funding (Massell, 2000; Massell & Goertz, 1999). Standards and the resources that may accompany efforts to implement them occasionally influence classroom teaching (Spillane & Zeuli, 1999).

However, these policy designs tended not to elaborate how these components might be aligned, what indicators signal that alignment had been accomplished, and how much alignment is “enough” (Buchmann & Floden, 1992). Perhaps more fundamentally, research and experience also highlight a “systemic reform fallacy”—the belief that the multitude of external reform demands “can be handled at the point of policy formation by creating conglomerate policies that subsume the different strands of reform activity into one carefully-orchestrated whole” (Knapp et al., 1998, p. 416). The political nature of public school systems makes such careful orchestration highly unlikely. Policymakers—especially elected officials—typically face incentives to make new, identifiable contributions to constituencies and to create discrete programs to ensure service delivery to traditionally under-served populations, not to organize ongoing policies (Elmore & McLaughlin, 1988). In schools, political values of democratic governance and participation, inclusiveness, and local determinism complicate attempts to streamline goals and strategies from the outside in (Clune, 1993).

Outside-in approaches also have rested on assumptions that the main relevant “external” contributors to policy incoherence are federal, state, and district level administrators and elected officials. This conception omits the multiple other actors both external and internal to schools—including parents, community organizations, teachers unions, and others—who likewise place various demands on schools and who, by some accounts, may significantly complicate school improvement efforts (Honig, Kahne, & McLaughlin, 2001; Knapp et al., 1998; Malen, Ogawa, & Kranz, 1990).

In addition, the strategy of mainly reorganizing policy demands from the outside in treats policy coherence as a technical problem of aligning the components of schooling and largely ignores the subjective reality of coherence—that regardless of how standards, curricula, and assessments may be organized, the same arrangement may be experienced differently by principals, teachers, and other implementers. Many systemic reform researchers

have highlighted that one teacher's or one school's coherent approach to school improvement may be another's fragmentation (Cohen & Hill, 2000; Spillane & Zeuli, 1999). Coherence depends on how implementers make sense of policy demands and on the extent to which external demands fit a particular school's culture, political interests, aspirations, conceptions of professionalism, and ongoing operations (Cohen & Hill, 2000; Datnow & Stringfield, 2000; Little, 1995; McLaughlin, 1991; Spillane, 2000b; Weick, 1995). In this view, coherence as a state of affairs is not a technical matter but a social construction produced through continual interactions among teachers, students, organizational structures, curriculum, and other tools of schooling. This view raises fundamental questions about how much and whether any external or internal alignment can remedy the deleterious effects of policy incoherence.

Coherence from the Inside Out

Second-generation systemic reform approaches have featured more prominent roles for schools in implementation but likewise have not fully conceptualized subjective dimensions of coherence. They have acknowledged roles for policymakers—especially school district central office administrators—as important participants in implementation but typically have not specified those roles in ways that have advanced implementation.

Second generation systemic reform strategies promoted coherence from the inside out (or bottom-up) by engaging school leaders in setting their own goals and improvement strategies that fit local circumstances and by encouraging school leaders to use those goals and strategies as a framework for making decisions about different aspects of organizational improvement. These activities seem to promote ongoing local sense making about relationships among external policy demands and otherwise address subjective dimensions of coherence neglected by first generation approaches. For example, according to policy design, the federal Comprehensive School Reform Demonstration program asks school leaders to choose from a set of comprehensive school designs and to align ongoing and future policies and programs to the locally chosen framework (Consortium for Policy Research in Education, 1998; United States Department of Education, 1998a). Title I school-wide programs promote a similar set of activities (Meyer & Wong, 1998).

These second-generation approaches too have fallen short in practice. School actors tend not to use the whole school reform approaches as organizing frameworks for school improvement but to add the approaches on to their repertoire of interventions as though they were targeted, categorical programs (Bodilly, 1998; Datnow, 1999; Meyer & Wong, 1998). Schools choose and use whole school designs for a host of reasons including their limited awareness of alternatives, mimicry of other schools, district priorities, and their personal relationships with vendors of particular designs (Datnow, 1999)—reasons not necessarily related to the strength of a particular framework for helping schools manage external demands or otherwise improve their performance. Some researchers have suggested that second-generation approaches as designed by states and districts also tend to frame coherence as the objective alignment of curriculum, instruction, and assessments, though they locate responsibility for alignment at the school level (Newmann et al., 2001).

Accordingly, these policy designs have not illuminated let alone promoted conditions under which such frameworks might be used to forge coherence and raise many of the same issues as first-generation alignment strategies.

In addition, while inside-out strategies address at least some of the limitations of outside-in approaches by featuring more prominent decision-making roles for schools, such benefits may come at the sacrifice of the benefits of the outside-in approaches. Specifically, research on the implementation of second-generation approaches suggests that these policy designs do not clearly articulate productive roles for policymakers, especially those at the district central office level in greatest proximity to schools to help with implementation. Researchers have observed that when district central office administrators do participate in implementation they tend to reinforce hierarchical power relationships with schools (Datnow & Stringfield, 2000), develop other policies that conflict with whole school reform goals (Spillane, 2000a), and promote district not school goals and strategies (Honig, 2003). School districts as bureaucratic institutions and school district administration as a profession may lack the capacity to support the school-level decision making at the heart of inside-out strategies (Honig, 2002). Others suggest that the micro- and macro-politics of district central offices and competing demands of various interest groups in education—including teachers' unions and parents—lead central office administrators to respond to the demands of these groups in ways that frustrate school-level decision making (Datnow, 1999; Malen et al., 1990).

In sum, attempts to address coherence from either the outside in or the inside out have not alleviated the deleterious effects of policy incoherence and provide few clues for gauging “how much” and under what conditions objective internal or external alignment might be productive or even possible. Outside-in strategies have framed coherence largely as the objective alignment of external demands rather than a continual process of negotiating the fit between schools' variable external demands and internal circumstances. Inside-out strategies offered school-level frameworks for these purposes but have not elaborated conditions under which schools and districts might actually use those frameworks as tools for increasing policy coherence.

Coherence as Craft

The limitations of outside-in and inside-out approaches have led some to call for a combined outside-in/inside-out approach (sometimes called a top-down/bottom-up strategy) and to begin to envision what such an approach might entail (e.g., Fullan, 1994, 1996). Following the lead of these researchers and practitioners, we first cast a broad net for empirical studies and well-developed theories within education that might elaborate dimensions of a combined approach. Specifically, per our critique of predominant approaches presented above, we searched for studies of school and district processes that seemed consistent with our conception of coherence as a continual process of negotiating the relationship between schools' internal circumstances and their external demands that involves both schools and organizations external to schools. This search turned up mainly prescriptive pieces chronicling how district central offices in particular should shift their roles and a handful of empirical studies that mainly presented schools and district central offices as barriers to such

processes. Second, we reviewed institutional studies of decision-making, organizational-environmental relationships, and organizational learning. These literatures, based largely in sociology and political science, do not address coherence directly and focus mainly on the experience of private firms or non-educational public agencies (e.g., hospitals). Nonetheless, they elaborated specific activities consistent with the kinds of organizational decision-making highlighted by our review of the coherence literature and factors that constrain or enable such decision-making. Third, we used these activities and factors as guides for revisiting literature on education policy implementation and change. In this stage, we looked specifically for examples that might confirm or refute the relevance of those activities and factors to public school systems.

We focused on district central office administrators as our focal policymakers for several reasons. First, both generations of systemic reform approaches in research and practice converged on the importance of school districts to implementation. Second, like others before us, we assumed that the proximity of district central office administrators to schools meant that they had essential roles to play in supporting complex school-level decision-making processes (e.g., Malen et al., 1990). Third, given the nascent stage of theory development about coherence we reasoned that a focus on one level of policymaking and one source of external demands would deepen our analysis in ways important to guiding future research at multiple institutional levels. While the research base on the practice of district central office administrators is admittedly thin, a recent surge of research on the role of districts in reform further fueled our interest in developing an initial theoretical base that might help guide this next generation of research (Hightower, Knapp, Marsh, & McLaughlin, 2002; Spillane, 1996).

Using the literatures and phases of investigation just highlighted, we define coherence as a process of negotiation whereby

school leaders and central office administrators continually craft the fit between external policy demands and schools' own goals and strategies and use external demands strategically to inform and enable implementation of those goals and strategies. We call this process "crafting coherence" to capture its dynamic nature and to highlight the continuous participation by schools and school district central offices that the process requires. In this way, we aim to build on a long-standing research tradition in political science that frames public-sector decision-making as an "art," "craft," or incremental process of "muddling through" (Behn, 1988; Kanter, 1988; Majone, 1989; Wildavsky, 1996). As elaborated in the following three subsections, crafting coherence involves specific activities: schools' development of schoolwide goals and strategies; schools' use of external demands to advance their goals and strategies; and school districts working with schools in both of these processes. Please see Figure 1 for a summary of these processes. In this view, school leaders act as judges or informed, grounded interpreters of their multiple demands (Cossentino, 2004; Shulman, 1983) and school district central office administrators become interpreters and supporters of schools' local decisions (Honig, 2003).

School Goal and Strategy Setting

Organizations that strategically manage their external demands develop internal "simplification systems" that enable them to draw resources from their external environments without becoming overwhelmed with the complexity of information, requirements, and other features of resource-rich (or demand-rich) environments (March, 1994a). Simplification systems also help organizational actors understand how to use external demands in ways that advance organizational production.

Research on decision-making suggests that such simplification systems operate on cognitive and organizational levels. On

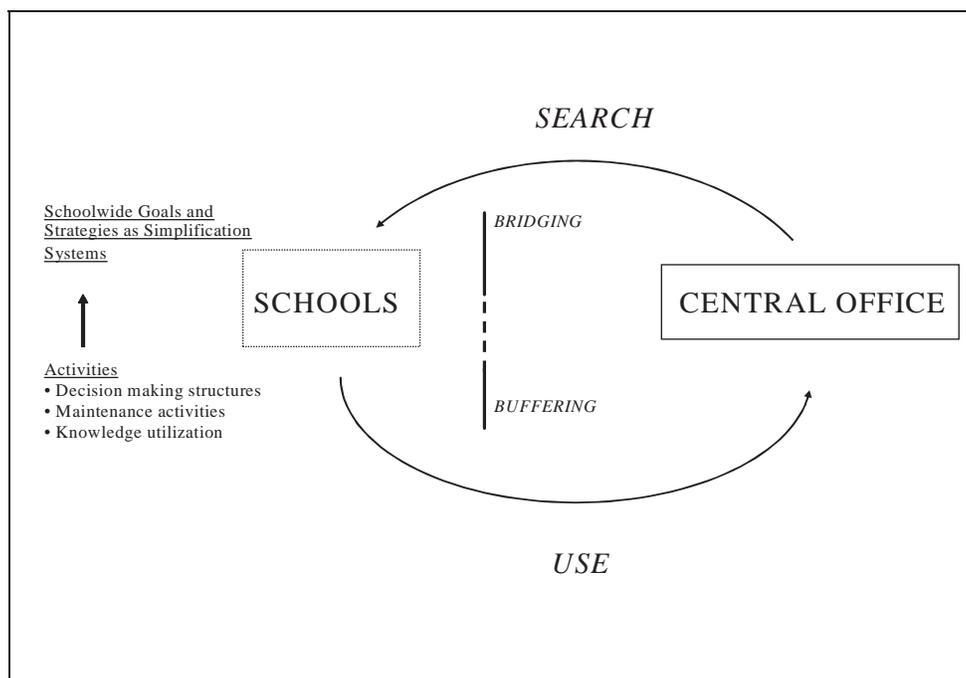


FIGURE 1. *Crafting coherence.*

a cognitive level, simplification systems provide rules and decision frames that help organizational actors such as teachers and principals translate complex problems into manageable forms—forms that organizational actors can comprehend and on which they believe they can take action (March, 1994a; Weick, 1995). These actors fit new information into familiar rules and decision frames to help cast the unusual into tried-and-true forms. Sometimes, they use new information to expand or edit rules and frames in an iterative process. Vaughan calls these cognitive structures “world views” and highlights that they not only give meaning to new information but they also direct attention in ways that limit the sheer volume of new information and otherwise curb confusion (Vaughan, 1996).

Similarly, simplification systems provide a set of “appropriate” responses to particular external demands, sometimes called identities or “scripts,” that help organizational actors behave confidently in the face of complexity and ambiguity (Barley, 1996; DiMaggio & Powell, 1983; March, 1994a; Meyer & Rowan, 1977). Such repertoires of responses seem imperative in complex social policy arenas such as education in which objective performance outcomes may be disputed or unavailable—a state of affairs that increases decision-makers’ urgency to find alternative guides for their decisions and other actions. On the flipside, these guides provide the basis for the development of new scripts by elaborating a framework within which decision-makers can assimilate new information (Cohen & Levinthal, 1990). For example, Barley found that in unfamiliar circumstances (e.g., when new technologies are introduced into urban and suburban hospitals), organizational actors draw on traditional conceptions of their professional roles and of their hierarchical workplace relationships to navigate their new nontraditional terrain. This reliance on traditional scripts helps professionals to maintain a sense of institutional order, essential to ongoing organizational operations and production, while also enabling the expansion of those scripts to include use of the new technologies (Barley, 1996).

On an organizational level, simplification systems provide a set of familiar and tangible activities that give concrete form to ambitious, ambiguous or otherwise complex reform approaches. These systems guide organizational actors’ choices about day-to-day activities and provide the basis for organizational change, much like musical themes in jazz under gird improvisation (Berliner, 1994; Hatch, 1997). For example, Brown and Duguid have shown that when faced with unfamiliar problems, workers invent solutions by combining familiar job goals, strategies for addressing predictable failures, and other cues from the location of the problem; these goals, strategies, and cues become the raw materials for development and change (Brown & Duguid, 1995).

We used these concepts to direct our review of literature on education policy implementation and school change with an eye to uncovering evidence of such simplification systems in school contexts. First, we found several empirical studies that demonstrated how professional scripts and organizational themes help educational actors make sense of new, complex work demands. For example, studies of school principals have revealed that school leaders draw on sets of appropriate responses, sometimes called institutionalized scripts or taken-for-granted notions of how principals should behave, when deciding how to interact with various

community agencies and families (Smylie, Crowson, Chou, & Levin, 1994). In this context, principals face significant uncertainty regarding how to collaborate with community agencies and families in ways that might enhance school performance in part because school principals typically do not have experience with such partnerships. Accordingly, some school principals draw on models of the principalship that they associate with school improvement and apply those models to their new contexts regardless of whether those models might actually lead to improvement under current circumstances. Also for example, research has demonstrated how intermediary organizations distill broad based education reform goals into meetings, problem-solving opportunities, and other specific experiences that enable educational leaders to participate productively in complex educational change initiatives (Honig, 2004).

When we searched more widely for simplification systems in education we found evidence of a few occasions when school-wide goals and strategies seemed to operate in these ways. But we found little elaboration on specifically when and how goals and strategies might operate in these ways. Accordingly, we turned to studies of organization-wide goal and strategy setting in both schools and other organizations. These studies suggested that when goals and strategies function as simplification systems, including as the primary sources of scripts and organizational themes, they have certain qualities and stem from specific goal and strategy setting activities.

Qualities of goals and strategies. We found goals and strategies function as simplification systems when they are both specific and open-ended.¹ That is, goals and strategies must provide enough specific content and structure to guide action (Newmann & Wehlage, 1995; Newmann, 1996). In the absence of such content and structure, goals and strategies may create unproductive conflict, may overwhelm organizational actors who must decode what particular goals and strategies mean, or may remain unutilized. At the same time, goals and strategies also must be open-ended to enable the formation of supportive coalitions and invite the expression of divergent views and conflict that sometimes fuels improvement (Achinstein, 2001; Ford & Backoff, 1988; Westheimer, 1998). Productive degrees of specificity and open-endedness depend on local contextual factors such as the level of trust among teachers and demands of external accountability systems (Achinstein, 2001). Individual dispositions also seem to matter. For example, studies of risk-taking in private firms suggest that organizational actors have different levels of tolerance and institutional supports for open-ended rules; furthermore, when rules are open-ended, those inclined to risk-taking will operate more productively than risk-averse individuals (March, 1994b).

Related to these dual demands for specificity and open-endedness school-wide goals and strategies operate as simplification systems when they are adaptable. Studies of innovating private firms demonstrate that organizational actors will not be able to anticipate all future circumstances when they first establish goals and strategies. Organizations survive and increase production and efficiency when organizational actors are able to adjust those goals and strategies as they receive feedback on performance and as environmental demands change (Argyris & Schon, 1996; Brown & Duguid, 1995). We distinguish adaptation of goals and strategies from the continual alteration of goals and

strategies (sometimes called mission drift and ongoing search) in two ways (Levitt & March, 1988) in two ways. First, adaptation involves periods of semi-stable or relatively unchanging goals and strategies. Second, adaptation is purposeful—that is, it is based on lessons learned from experience; some degree of knowledge acquisition or, more broadly, capacity building is associated with adaptation (Cohen & Levinthal, 1990; Levitt & March, 1988). By contrast, mission drift and open-ended search involve ongoing partial or wholesale replacement of goals and strategies without either periods of stability or the development of new knowledge or capacity, and they typically result in the unproductive depletion of resources (Cohen & Levinthal, 1990).

Activities that Enable Schools and Other Organizations to Establish Such Goals and Strategies

School research on this topic is limited but suggests three activities consistent with what we call productive goal and strategy setting: (a) creating collective decision-making structures; (b) maintaining collective decision-making structures, and (c) managing information. Table 1 provides an outline of these findings.

The first two activities—creating and maintaining collaborative decision-making structures—relate to the participation of individuals in the goal and strategy setting process, and, usually, the availability of formal decision-making bodies within schools to facilitate such participation. These findings in school studies are consistent with political theories of decision making that posit decision makers will use goals and strategies when they believe they “own” them, either through direct participation in goal and strategy development or other sources of investment (Blase, 1998). These findings also reflect studies of cognition and learning that highlight that participation increases the likelihood that individuals will be aware that certain decision frames are available and understand those frames and how to use them (Lave, 1991; Levitt & March, 1988; March & Olsen, 1989). Decision frames and decisions themselves result from individuals’ active engagement in the social construction of problems and solutions; participation on decision-making bodies such as school-site councils may increase incidents of joint sense-making and construction of shared goals and strategies (Weick 1995).

For example, Bryk and colleagues found that site-based councils in Chicago were essential to the ongoing development of school-wide plans (Bryk, Sebring, Kerbow, Rollow, & Easton, 1998). Others have found that formal and informal coalitions of teachers within schools serve this purpose (Blase, 1998). An emerging literature on teacher professional communities demonstrates that groups of teachers convened around curriculum development, teaching, and student work can craft goals and strategies that serve as powerful technical and normative guides for teachers’ practice even in urban districts facing a barrage of external policy demands (Louis, Kruse, & Marks, 1996; McLaughlin & Talbert, 2001; Stein & Brown, 1997; Westheimer, 1998). Communities of teachers in schools help teachers make sense of multiple messages about instruction, not only from districts but from states and professional associations as well (Coburn, 2001, Spillane & Zeuli, 1999). Strong teacher professional-learning communities seem to focus on learning goals and strategies and to reevaluate them on a regular basis perhaps more routinely than site-based governance councils, which researchers have found tend to engage in

resolving short-term issues of school administration and governance (Malen et al., 1990).

Research on schools as learning communities suggests that when goals and strategies operate as simplification systems, school teachers and principals actively maintain them. Maintenance of goals and strategies involves the management of how adults—especially teachers—enter and exit a given school so that they contribute to the development and use of goals and strategies. Enabling the entry of new staff with backgrounds and values consistent with the overall direction of the goals and strategies appears essential to infusing schools with new resources for their implementation as well as new ideas for further developing them. Schools that report and demonstrate high levels of success at actually tapping these new ideas and resources formalize processes of organizational initiation and incorporation through orientations and ongoing apprenticeships (Chatman, 1993; Lave, 1991; Louis et al., 1996; Newmann, 1996; Stein & Brown, 1997). Likewise, these schools ritualize the exit of teachers and other staff from schools to limit depletion of institutional knowledge and other disruptions (Lave, 1991).

The development of productive school-wide goals and strategies also involves the management of information—specifically, the regular encoding of information into various formal (written, explicit) and informal rules that school staff can access. For example, teachers and administrators that manage information in these ways regularly document their practice and review various data sources about their school performance and use those data as the basis for revisiting their goals and strategies (Cohen & Levinthal, 1990; Datnow & Stringfield, 2000; Elmore & Burney, 1997; Newmann, 1996).

We were able to track some dimensions of schools’ capacity that seem necessary for engaging in these activities as well as conditions that constrain or enable schools in doing so. However, data were incomplete. Researchers have tended not to examine school capacity and conditions conducive to the goal and strategy setting described here. Data primarily stem from surveys of teachers that capture their reports of the capacity and conditions they believe constrain or enable goal and strategy setting to the exclusion of additional, alternative sources of evidence that might confirm or refute such reports. Nonetheless, available data reveal several noteworthy points.

First, conflict rather than consensus sometimes under-girds the processes described here. For example, Westheimer found communities of teachers continually setting and revisiting goals and strategies in schools riddled with conflict about professional practice (Westheimer, 1998). Achinstein has explored directly the strategic function of conflict among teachers in building school capacity for these purposes (Achinstein, 2001). Studies of private firms long have confirmed that even when workers develop their own informal rule structures that appear in opposition to organizational authorities, their informal rules may actually reinforce formal rules and enable organizational production (Blau, 1963; Burawoy, 1979). Ultimately, trust and collegiality rather than agreement among organizational members may be more consequential to these processes (Bryk & Schneider, 2002).

Second, those external to schools who aim to support school improvement efforts—sometimes called design teams, school coaches, consultants, professional developers, and intermediary

Table 1
Activities, Capacity, and Conditions for School-Wide Goal and Strategy Setting

| Type of Activity | Specific Activities | School Capacity | Enabling Conditions | Constraining Conditions |
|--|--|---|---|---|
| Create collective decision-making structures | Develop and maintain site-based management teams (Bryk et al., 1998; Malen et al., 1990) | <ul style="list-style-type: none"> Trust, collegiality among staff (Bryk et al., 1998) | <ul style="list-style-type: none"> New authority for decision making transferred to school (Bryk et al., 1998) | <ul style="list-style-type: none"> Districts and states transfer responsibility but not authority (Malen et al., 1990) Clashing norms and styles between parents and schools (Malen et al., 1990) |
| | <p>Build coalitions within schools (Blase, 1998)</p> <p>Grow/sustain teacher professional communities (Coburn, 2001; Louis et al., 1996; McLaughlin & Talbert, 2001; Newmann & Wehlage, 1995; Stein & Brown, 1997; Westheimer, 1998)</p> | <ul style="list-style-type: none"> Principal leadership (Lam, 1997; Newmann, 1996; Newmann et al., 2001) Interdependent work structures (Louis et al., 1996; Newmann, 1996) | <ul style="list-style-type: none"> Small school size (Lee & Smith, 1995, 1996; Newmann, 1996) School autonomy (Louis et al., 1996; Newmann, 1996) Conflict (Achinstein, 2001; Westheimer, 1998) Consensus (Westheimer, 1998) “Non-systems actors” (Coburn, 2002) | <ul style="list-style-type: none"> Independent department structures (Little, 1995) Multiple professional and personal scripts |
| Maintain collective decision-making structures | Manage entry and exit of adults in schools (Chatman, 1993; Lave, 1991; Louis et al., 1996; Newmann, 1996; Newmann & Wehlage, 1995) | <ul style="list-style-type: none"> Time (Newmann et al., 2001) | <ul style="list-style-type: none"> Coaches, design teams (Bodilly, 1998; Wechsler & Friedrich, 1997); consultants (Argyris & Schon, 1996) | <ul style="list-style-type: none"> School districts limit number and type of professional development days (Bodilly, 1998) |
| | Provide regular staff development (Meyer & Wong, 1998) | | | |
| Manage information | Formalize goals and strategies into various written or otherwise transferable rules (Elmore & Burney, 1997; Hatch, 1997; March, 1994a; Newmann, 1996; Purkey & Smith, 1983) | | <ul style="list-style-type: none"> State standards (Newmann, 1996) Autonomy and authority (Newmann, 1996) | |
| | Collect and use data to assess “what is” (Datnow & Stringfield, 2000; Massell, 2000) and what has been (Cohen & Levinthal, 1990) | <ul style="list-style-type: none"> Data are available (Datnow & Stringfield, 2000) School staff know how to use data for decision making (Datnow & Stringfield, 2000) | <ul style="list-style-type: none"> Intermediary organizations (Honig, 2004). | <ul style="list-style-type: none"> Schools tend not to have people skilled at using data for decision making (Datnow & Stringfield, 2000) |
| | Develop and reinforce shared norms, beliefs, and values (O’Reilly III & Chatman, 1996, Tschannen-Moran & Hoy, 2000) | | | |

organizations—have important roles to play in collective decision-making processes and information management (Bodilly, 2001; Coburn, 2002; Honig, 2004; Stein & Brown, 1997). These external assistance providers enhance schools' resources for goals and strategy setting, including school actors' knowledge of possible goals and strategies and funding for their implementation. These providers also facilitate regular dialogue among school staff essential to goal and strategy setting.

Third, teachers and other organizational members belong to multiple communities—professional, personal, and epistemic, among others—from which they may draw scripts for decision-making. The availability of multiple scripts and logics may mean that school-level actors can make sense of a broader range of external demands than if they had fewer scripts from which to draw and lead to the kinds of productive conflict highlighted above. However, in other instances, multiple scripts can lead to confusion about how to make sense of specific external demands and create rifts among teachers and other school staff that impede collective sense making (March, 1994a; Weick, 1995).

Schools Use Goals and Strategies to Bridge and Buffer External Demands

Literature on organizational-environmental relationships traditionally has suggested that schools as subordinate or highly dependent organizations in hierarchical systems should be expected to operate as relatively passive agents of their environments; even if schools have the capacity to set goals and strategies, these goals and strategies typically will not survive pressures from external demands over time (e.g., Dowling & Pfeffer, 1975; Gillespie & Mileti, 1979; Perrow, 1972; Pfeffer & Salancik, 1978; Zucker, 1983). More recent studies emphasize that under some circumstances organizations can and do play more active roles in using external demands to advance their own goals and strategies (Oliver, 1991). Activities of such proactive organizations in education and other fields range from those that invite or increase interaction (bridging) to those that limit it (buffering) as summarized in Table 2.

Bridging activities involve organizations' selective engagement of environmental demands to inform and enhance implementation of their goals and strategies. Policy researchers long have understood that such engagement of policy demands can provide opportunities for schools to attract additional essential resources (including funding, access to professional networks, and knowledge), to negotiate with stakeholders, and to innovate for improved performance (Newmann et al., 2001). For example, school leaders have reported that participation in state and federal programs sometimes provided them with a language and a set of activities for realizing previously elusive goals and strategies and, in some cases, amending their goals and strategies to reflect this new knowledge (Elmore, 1996; McLaughlin & Talbert, 2001; Spillane & Zeuli, 1999).

Organizations bridge to their external demands in several ways. On the high end, they pull the environment in—by incorporating members of external organizations into their own organizational structures. By “capturing” those exerting external pressures, organizations blur boundaries between “organization” and environment”, heighten interactions between the two, and increase

opportunities to use external demands to advance internal goals and strategies (Pfeffer & Salancik, 1978; Selznick, 1949). For example, in his classic study of the implementation of federal redevelopment policy, Selznick (1949) demonstrated how conveners of a regional planning team, the Tennessee Valley Authority (TVA), included as members various regulators and others who threatened to detract from local goals and strategies. By including such “outsiders” on the team, the TVA gained control over, and, in some cases, silenced contrary external demands.

Organizations also bridge to external demands by working to shape the terms of compliance with external demands. Specifically, organizations lobby policymakers and others to influence the design of policies, programs, and other external demands (DiMaggio & Powell, 1983). Research on the diffusion of innovations suggests that organizations influence external demands by acting on them early. For example, studies of equal opportunity employment law, total quality management programs, long-term incentive plans, and other organizational reforms reveal that terms of complying with such demands are often unclear early in implementation. By choosing to participate before others, organizations have opportunities to define terms of compliance for themselves and other organizations (e.g., Edelman, 1992; Westphal, Gulati, & Shortell, 1997; Westphal & Zajac, 1994). Sending out organizational members to investigate and influence external demands also helps organizations shape terms of compliance (Gladstein & Caldwell, 1985; Huber, 1991a; Kanter, 1988; Levitt & March, 1988).

On the other end of the spectrum, schools may advance their goals and strategies by buffering themselves from external demands. By buffering we mean not the blind dismissal of external demands but strategically deciding to engage external demands in limited ways. Periods of buffering can help organizations incubate particular ideas and ignore negative feedback from their environments that can derail their decision-making (March, 1994a). An organization may buffer itself from external demands by deciding simply to limit or suspend organizational-environmental interactions. For example, a school may decline to seek funding from particular sources or apply for waivers from regulations (United States Department of Education, 1998b). Organizational actors may launch organizations outside particular regulatory systems in an effort to curtail organizational-environmental ties (Suchman, 1995). Ignoring negative feedback from external sources as an important buffering strategy (March, 1994a).

Alternatively, schools advance their goals and strategies by limiting environmental linkages without completely suspending them. We found two related activities associated with this hybrid, bridging-buffering strategy and located them in the middle of the spectrum on Table 2: symbolic adoption and adding peripheral structures. Researchers have observed that organizations across sectors may adopt external demands symbolically but not allow those demands to influence core organizational activities (Westphal et al., 1997). For example, an organization might align its stated goals and strategies to reflect external demands but intentionally leave its day-to-day work largely unchanged—what some have called a peripheral or first-order change rather than a core or second-order change (Argyris & Schon, 1996; Cuban & Tyack, 1995; Spillane & Zeuli, 1999). Some have observed that classroom teachers may incorporate new reform strategies into their

Table 2
Bridging and Buffering Strategies to Manage External Demands

| | Activities | Associated Capacity |
|---|---|---|
| Bridging  | <p><u>Pull the environment in</u> Blur boundaries between organization and environment.</p> <ul style="list-style-type: none"> Put external regulators and others on boards of directors (Pfeffer & Salancik, 1978; Selznick, 1949) | <ul style="list-style-type: none"> Wizard-like leaders (Elmore, 1996) Proximity to public sphere—sector, administrative linkages (Edelman, 1992; Westphal & Zajac, 1994) Professional affiliation, norms (Manning, 1982, 125) |
| | <p><u>Shape terms of compliance</u> Organizations alter environmental demands/expectations (e.g., law, regulations, evaluation criteria) to advance goals and strategies. Organizational members enact environment according to organizational understandings (Lipsky, 1980; Manning, 1982; Weick, 1995).</p> <ul style="list-style-type: none"> Communicate with/lobby policymakers (Dowling & Pfeffer, 1975) Act first (Edelman, 1992; Westphal & Zajac, 1994) Send people out for reconnaissance about environmental changes (Gladstein & Caldwell, 1985; Huber, 1991a; Kanter, 1988; Levitt & March, 1988) <p><u>Add peripheral structures</u> Add new, distinct, often peripheral units on to school to interact with policy systems and to carry out particular environmental demands and to determine whether and how to engage the rest of the organization. Enables acquiescence to superiors without derailing goals and strategies (Burns, 1980); demonstrates compliance (Elmore & McLaughlin, 1988)</p> <ul style="list-style-type: none"> Committees (Burns, 1980) New offices (Edelman, 1992; Elmore & McLaughlin, 1988; Westphal & Zajac, 1994) <p><u>Symbolically adopt external demands</u> Adopt but not use environmental demands (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Westphal & Zajac, 1994)</p> <ul style="list-style-type: none"> Align mission, goals, and reported practices to external demands (Argyris & Schon, 1996; Cuban & Tyack, 1995; Spillane & Zeuli, 1999) <p>Adopt the language not the activities of external demands (DiMaggio & Powell, 1983; Elmore, 1996; Meyer & Rowan, 1977; Spillane, 2000a; Spillane & Zeuli, 1999)</p> <ul style="list-style-type: none"> Demonstrate existing school arrangements meet or exceed environmental demands (DiMaggio & Powell, 1983; Elmore, 1996; Meyer & Rowan, 1977) | <ul style="list-style-type: none"> Size (large) (Edelman, 1992; Westphal & Zajac, 1994) Presence of personnel or human resources department (Edelman, 1992; Westphal & Zajac, 1994) Unionization (Edelman, 1992; Westphal & Zajac, 1994) |
| Buffering | <p><u>Suspend ties to the environment</u> Reinforce borders between organization and environment; do not interact with environment</p> <ul style="list-style-type: none"> Do not participate in programs, policies, funding streams or networks (United States Department of Education, 1998b) Create organizations outside the regulatory system (Suchman, 1995) Ignore negative feedback (March, 1994a) | <ul style="list-style-type: none"> Funding to go it alone |

discourse about their teaching practice and other activities without necessarily integrating those strategies into their actual practice (Spillane, 2000b; Spillane & Zeuli, 1999. See also DiMaggio & Powell, 1983; Meyer & Rowan, 1977.). Organizations become early adopters of external demands when they can demonstrate that their ongoing operations already meet or exceed

external demands; in this way, these organizations too adopt external demands without changing their ongoing operations (Elmore, 1996).

Organizations also may add structures on to their organizational peripheries both to interact with and to avoid external agents in the short term and to make decisions about whether and

how to engage other parts of the organization in such interactions over the long term. For example, Elmore and McLaughlin have chronicled that states and school districts designated new offices to implement Title I of the Elementary and Secondary Education Act, a major federal program for low-income students. These offices provided unambiguous demonstrations of compliance with external demands in the short term and, over time, helped negotiate how the rest of their organizations would respond (Elmore & McLaughlin, 1988. For examples in other sectors, see: Edelman, 1992; Westphal & Zajac, 1994). Currently, schools assign reading specialists, testing coordinators, and others to serve such purposes.

Research teaches little about how much bridging and buffering is involved when schools use their goals and strategies productively. However, research does suggest that the right balance between bridging and buffering may depend on various contextual circumstances within schools and policy environments over time. Schools that make productive decisions about bridging and buffering have the capacity for both strategies in their repertoires. Interestingly and consistent with this hypothesis, certain organizational features enable both bridging and buffering. For example, researchers have observed that peripheral units both help organizations pull their environments in as well as shield their organizations from environmental intervention (Gladstein & Caldwell, 1985; Kanter, 1988).

Organizations may increase their capacity for both bridging and buffering by expanding their range of organizational roles and members. In other words, differentiation among school staff as in some models of distributed leadership can expand a schools' capacity for bridging and buffering (Spillane, Halverson, & Diamond, 2001). For example, Lam found that principals and teachers varied in their relationships to external policy demands and in the tools each had for bridging and buffering strategies (Lam, 1997). Manning highlighted that an individual's professional identity leads him/her to socially construct "organization" and "environment" in ways that inform decisions about bridging and buffering (Manning, 1982, 125) which suggests that the availability of different identities within an organization can expand its options for bridging and buffering. Schools with formal relationships with community agencies have opportunities to link with a broader range of policymaking organizations than schools working alone (Honig, 2003). Within-group variation is also likely. Spillane and Zeuli, for example, show that teachers differ in their strategies and capacity to manage demands of standards-based reform (Spillane & Zeuli, 1999). Some teachers in the same schools will change their practice in ways that reflect complex forms of teaching; others will adopt the language of reform but leave their day-to-day practices largely unchanged (Cohen & Ball, 1990).

School District Central Offices as School Support Providers²

When organizations develop goals and strategies and use them in the ways we just highlighted, they do not go it alone; studies of organizational-environmental relationships emphasize that environmental or external actors and organizations play enabling or constraining roles in these processes. Likewise, literature on policy coherence in education has recognized the importance of environments and agents beyond schools' walls—particularly school

district central offices—as fundamental. Some studies have highlighted that district central offices writ large have supported school goal and strategy setting by providing resources for these processes including funding for professional development (David, 1990; Elmore & Burney, 1997; Massell, 2000; Massell & Goertz, 1999; Rosenholtz, 1991). District central offices infuse schools with new knowledge about best practices (Rosenholtz, 1991; Spillane & Thompson, 1997) and support schools' learning about those practices (Spillane & Thompson, 1997). School district central offices also develop and disseminate frameworks for local goal and strategy setting (Bodilly, 1998). However, research and experience suggest that central offices typically lack the fiscal, knowledge-based, and administrative resources that such activities require (Elmore & Burney, 1997). Furthermore, such resources without the conferral of new decision-making authority to schools further frustrate implementation (Malen et al., 1990).

Research also fails to illuminate specifically what district central offices do when they help schools implement productive goals and strategies. When central offices have helped schools choose and use goals and strategies, they typically have provided that assistance selectively—in support of goals and strategies aligned with central office priorities. For example, studies of New York City District 2 and New American Schools designs have featured school districts that encourage schools to develop school-wide goals and strategies and to use them as the basis for decision making. In both cases, however, district central offices appear primarily as the providers rather than the enablers of school-wide goals and strategies (Datnow, 1999; Elmore & Burney, 1997).

Research on other governmental levels likewise provides limited guides for district central offices in enabling schools' goals and strategies. Federal and state governments have aimed to enable schools' decision making by waiving regulations. However, studies of federal and state waiver programs suggest that schools tend to use the new discretion to come into compliance with external demands—for example, to extend their deadlines for meeting special education or school safety requirements—not to engage in the goal and strategy setting processes outlined here (Fuhrman & Elmore, 1990; United States Department of Education, 1998b).

To develop a set of research-based hypotheses regarding how school district central offices might participate productively in schools' goal and strategy setting, we turned to theories of organizational learning. These theories do not speak directly to this question, but researchers have begun to use them to elaborate what central office administrators do when they support school-level decision making in other contexts in ways that seem relevant to crafting coherence (e.g., Honig, 2003). Specifically, theories of organizational learning under conditions of ambiguity suggest that central office administrators enable school-level decision-making when they search for information about schools' chosen goals and strategies and use that information (rather than district priorities or state and federal regulations, for example) as a primary guide for the allocation of resources and development of central office policies that might inform and reinforce schools' decisions and help with their implementation. This conceptualization departs from traditional views of implementation that primarily focus on the extent to which schools execute external goals and strategies and how policymaking bureaucracies such as school districts monitor schools'

compliance (Honig, 2004). This approach also differs from waiver programs in which district central offices mainly limit their participation in implementation and from various forms of participatory policy analysis or policy advocacy in which schools aim to influence district agendas (Honig, 2004; Raywid & Schmerler, 2003). In this view, school and district central office leaders actively work together to help schools use multiple, external demands to inform and advance their goals and strategies.

To elaborate, when organizational actors such as school district central office administrators search, they look for information to provide their own ongoing operations. Other researchers refer to similar processes as exploration (Levitt & March, 1988) or knowledge acquisition (Huber, 1991b). Organizations that search in these ways typically assign individual organizational members to specialize in these knowledge acquisition roles. For example, private firms have hired new staff who bring specific information with them or designate current staff as “boundary spanners”—individuals who venture beyond their organizations to gather new information (Gladstein & Caldwell, 1985; Huber, 1991b; Kanter, 1988). Honig found that school district central offices build their capacity for search in part by hiring new staff with the ready-inclination for day-to-day work with schools (and community agencies) and for the risk taking inherent in non-traditional administrative roles (Honig, 2003, 2004c). Information also may be sent into an organization as when schools submit comprehensive school improvement plans to school district central offices as a formal stage of policy implementation.

When organizational actors use information, they incorporate it or deliberately decide not to incorporate it into organizational rules or policy. While terms vary, theorists generally agree that using information involves the following sub-processes:

- *Interpretation.* Once organizational actors receive new information, they interpret or make sense of that information. This interpretation process involves deciding whether and how to incorporate the information into organizational policy (Weick, 1995). Interpretation is essential because typically numerous policy responses or non-responses may “fit” a given situation (Yanow, 1996).
- *Storage.* Information does not become a part of formal organizational policy until it is encoded into rules, what Levinthal and March have defined as “any semi-stable specification of the way in which an organization deals with its environment, functions, and prospers” (Levinthal & March, 1981, p. 307) and what others have referred to as organizational memory (Argyris, 1976; Argyris & Schon, 1996; Cohen, 1991; Huber, 1991b; Levitt & March, 1988). Researchers have found that “rules” in the public sector take many forms including administrative bulletins, school board decisions, resource allocations, and individual administrators’ decisions about their own work (Honig, 2003; Weatherley & Lipsky, 1977).
- *Retrieval.* Organizational actors then draw on the new rules or policies to guide their subsequent choices and actions (Levitt & March, 1988).

Search and use are continual, ongoing and equally important. If district central office administrators spend resources disproportionately on search, they run the risk of failing to use information they already have collected to support schools’ decision-making or of becoming inundated over time with more

information than they can manage (Argyris, 1976; March, 1994a). An exclusive focus on using information already collected could result in central office administrators developing policy based on outdated information and on their improved performance with a finite set of competencies not necessarily appropriate to implementation demands (Argyris & Schon, 1996). Importantly, search and use enable the other. Without search, central office administrators risk making decisions irrelevant to schools’ goals and strategies; without use, central office administrators may fail to provide appropriate supports³.

In sum, school and systemic reform research has highlighted an important role for school district central offices in enabling schools to establish and use goals and strategies in the ways outlined above, but this research has not elaborated what this role entails. We start from the premise that at a minimum, such district central office support roles involve new forms of information management—specifically, that central offices will not support schools’ goal and strategy setting unless they have information about schools’ decisions and aim to use that information in ways that may enable their implementation. Organizational learning theory provides an initial set of concepts consistent with such environmental supports. Accordingly, we include organizational learning by school district central offices as the third leg of crafting coherence. Exactly how school district central offices manage to participate in these activities in ways that help schools establish and use goals and strategies productively is an important arena for future research.

Conclusions and Implications

This article provides a definition of policy coherence as an ongoing process whereby schools and school district central offices work together to help schools manage external demands. We call this process crafting coherence and, using schools and district central offices as a starting point, define three activities that crafting coherence entails: (a) Schools establish their own goals and strategies. These goals and strategies typically are specific and open-ended, as well as adaptable, and developed through sustained and managed school-based participatory activities. (b) Schools use their goals and strategies as the basis for deciding whether to bridge or buffer external demands. (c) District central offices support these decision-making processes by continually searching for and using information about schools goals, strategies, and experiences to inform their own operations.

This conceptualization of policy coherence as process or craft departs from traditional definitions of policy coherence in education policy and research in several ways. First, we highlight that coherence may be productively viewed not as the objective alignment of curriculum, instruction, and assessments by agents either internal or external to schools but as an ongoing process. This characterization reflects political realities of policymaking—that the convergence of multiple demands on schools is a common and likely unavoidable consequence of the operation of public policymaking institutions. Likewise, some schools thrive when multiple demands converge on them in part because multiple demands can mean additional resources for educational improvement. Accordingly, multiple external demands do not present a problem to be solved but an ongoing challenge to be managed, a potential

opportunity for schools to increase necessary resources, and an important arena of organizational activity.

Second, we feature schools as one set of central agents in crafting coherence. This emphasis reflects research and experience that shows external demands and internal circumstances frequently change and that even demands and circumstances considered stable by some professionals may be perceived differently by various teachers, principals, and other school staff. In other words, school actors long have determined the extent to which a situation is more or less coherent. The conceptualization of coherence presented here acknowledges this role and begins to elaborate specific activities involved in carrying it out.

Third, our conceptualization suggests that school district central offices also are integral to schools' management of multiple, external demands. District central office administrators' roles in this process include working with schools to collect information about schools' goals and strategies and using that information to guide their provision of supports. These activities challenge traditional roles for policymakers such as central office administrators as primary decision makers and recast them as informed supporters of others' decisions (Honig, 2003).

Implications for Research

This review draws to a large extent on theoretical and empirical research relevant to but outside education. Therefore, throughout this article, we present our conclusions about school and school district central office roles in crafting coherence as hypotheses. These hypotheses move beyond a traditional focus on coherence as a desirable outcome or state to be achieved and frames key parameters for future education policy research on policy coherence as a process or craft.

First, researchers can explore the specific activities that crafting coherence in education may entail. Specifically, to what extent do the three broad activities presented above, derived primarily from the experience of private firms, also apply to public sector organizations such as schools and school district central offices? If so, how do these activities play out in school contexts—in particular, under what conditions do schools develop and use schoolwide goals and strategies as the simplification devices described above, what forms do bridging and buffering take in school contexts, and when specifically are bridging and buffering productive? When schools and school district central offices engage in the activities presented here, what is the impact on school management, teaching, and other outcomes often considered in studies of policy coherence? The activities presented in this initial conception will require new roles and capacity typically in short supply in urban school districts which means in part that implementation may progress slowly at best and any objective improvements may not be evident in the short term. Given these implementation considerations, does crafting coherence have any negative consequences, particularly in contemporary school and district contexts increasingly characterized by high-stakes testing and presses for short-term performance gains? As educational researchers develop a base of knowledge around these activities, they might consider a broader set of issues. In particular, what are appropriate and productive roles for states and the federal government in helping schools and school district central offices craft coherence? When coherence is viewed as a craft, what are appropriate and productive functions of policy in enabling the kinds of processes

highlighted here. Do certain types of federal, state, or local policies make it easier for schools and districts to craft coherence?

For the purposes of generating an initial theoretical base, we focused our analysis on how schools strategically manage external demands and did not distinguish among those demands. Do the findings arrayed here apply to the full complement of schools' demands such as those from school boards, teachers' unions, and parents, as well as state and federal governments? Do these findings hold true for certain types of demands more than others?

Second, the capacity and conditions we identified in the literature provide initial criteria for choosing future strategic research sites—locations where researchers may stand an especially good chance of observing crafting coherence in action. A focus on schools and districts that meet these criteria may prove particularly productive for advancing the theory and practice of crafting coherence.

Third, the analysis presented here emphasized that coherence as a state of affairs depends on individual and collective sense making. Accordingly, outcome measures related to coherence will vary precisely because coherence is being achieved. Researchers may do well to employ research designs that can accommodate such a variable and situated phenomenon.

Implications for Policy and Practice

This article also has several implications for policy and practice. First as outlined at the start of this article, past policy efforts and public and private investments in policy coherence typically have focused in part on the objective alignment of particular components of schooling (e.g., standards, curricula, and assessments) either from the point of policy origin (i.e., the outside-in) or the school level (i.e., the inside-out). Our conceptualization of coherence as a craft suggests the importance of ongoing investments in the institutional capacity of schools and district central offices to engage in practices that may help schools manage multiple external policy demands productively. Practitioners may find the conception of coherence as craft in and of itself generative of new approaches to helping schools strategically manage external demands. This general conception of coherence as craft suggests that those interested in helping schools manage multiple external demands should consider providing funds not solely for the implementation of new programs and policies as levers of policy coherence but for the development of people in schools as the crafters of coherence and in school district central offices as supporters of that craft.

Second, our definition of coherence, including its activities, capacity, and conditions, requires confirmation from direct empirical studies of the relationship between these aspects of crafting coherence and improved school performance. Nonetheless, the initial empirical support for these dimensions from education and other sectors suggests that these dimensions may point to productive courses of action for schools and school district central offices pending further investigation. For example, our review suggests that neither schools nor school districts acting alone will be able to remedy the deleterious effects of multiple external demands; accordingly, district central office administrators and schools might explore new relationships that might support schools' goal and strategy setting. Likewise, reformers who have pursued teacher professional learning communities as strategies for strengthening teachers' practice might consider how such

communities might be marshaled expressly to help schools manage external demands as suggested in Table 1. Those who do explore the activities identified here may do well to keep in mind that our definition includes challenging and non-traditional activities and relationships, the likes of which require deliberate, directed action. In these new relationships schools become central decision makers and school district central offices become supporters of others' decisions and both face demands to work together in new ways. Some district central office administrators and other policy makers may embrace these new roles while others may seek to avoid the loss of formal control over school decisions at the heart of crafting coherence. The best stewards of crafting coherence at school and district levels may be those who can tolerate and navigate such highly collaborative and interdependent terrain.

NOTES

¹ For a related finding about the importance of open-ended and closed rules, please see Honig (in press).

² This section draws heavily on two other publications: Honig, (2003, 2004b).

³ See Hatch (2000) for a related discussion of the trade-offs between "exploration" and "exploitation" in schools and school reform. As with other organizations, if schools invest too much time and too many resources in preserving or "exploiting" existing knowledge and practices and fail to invest enough in "exploring"—in developing new knowledge and practices then they may be unable to adapt to changing conditions. Conversely, if they over-invest in developing new knowledge and practices the risks of failure increase (Hatch, 2000).

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