



The Dilemmas of Educational Reform

David K. Cohen^{*1}, James P. Spillane^{*2}, and Donald J. Peurach^{*1}

The environment of U.S. schools has changed dramatically over a quarter century as standards tied to test-based accountability and market competition became commonplace. We examine the issues that school systems face in this changing environment, to identify considerations for researchers interested in reform as educational system building. We highlight a central dilemma: Systems manage environmental pressures to become more coherent enterprises that focus on tested outcomes while managing the inherited differentiated organizations and environmental pressures which support these enterprises. We identify four activity domains that are defined by these competing pressure: consensus on outcomes; infrastructure to connect outcomes with instruction; recruitment that is aligned with outcomes; and competing environmental pressures.

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Once upon a time, America had, or believed it had, One Best System (Tyack, 1974). Public schools were managed by White men, most of whom grew up in rural America, and schools were attended mostly by White students. Elementary school enrollments skyrocketed in the late 19th century, and the educational programs in these schools seem to have been rudimentary and similar (Rice, 1893). But as public education grew in the 20th century, it differentiated to deal with more varied students and conceptions of educational need. Horace Mann argued in 1848 that public schools were “the balance wheel of the social machinery.” But by the 1930s, in many high schools, there were no common outcomes of the sort that Horace Mann had in mind around which systems could cohere, because there were fewer and fewer common programs. As internal differentiation grew, so did the loose coupling that later scholars would notice.

Public education had broad public support. The expansion of secondary schooling between 1900 and 1960 required political and fiscal backing in many thousands of localities, as had the earlier growth of elementary systems (Goldin & Katz, 2009). System quality was understood in terms of markers like certified teachers, expenditures, and graduation rates; more was better. There were a few nonpublic systems, but public schools occupied most of the schooling space. System managers and some academics imagined school systems that were essential to the economy, tightly managed from the top, and internally

coherent, like the rapidly emerging manufacturing organizations of their day.

If the One Best System ever did exist, it does no longer, in part because the schools’ environment changed. There has been a dramatic loss of public confidence (*Confidence in Institutions*, 2017). Research in the 1960s and 1970s seemed to dissolve the presumed connection between markers of quality like certified teachers and outcomes like student learning; more was not necessarily better. Research also was thought to show that far from being “the balance wheel of the social machinery” that corrected social and economic inequality, schools maintained or even increased inequality (Coleman et al., 1966; Jencks et al., 1972).¹ Growing conservative pressure for change in social policy also weakened confidence in inherited views of education (Cohen & Moffitt, 2009; Mehta, 2013; Vinovskis, 2009).

The loss of confidence was expressed in efforts to create markets for schooling by way of vouchers and charter schools. Without competition from new providers, advocates argued, monopolistic public schools would continue to perform poorly. Lost confidence also was expressed in standards-based reform, a

¹University of Michigan, Ann Arbor, MI

²Northwestern University, Evanston, IL

*All authors contributed equally. The order of authors does not reflect different contributions.

set of policies that targeted schools that failed to educate students and that held teachers, schools, and systems accountable. Schools that failed to meet performance standards could be closed, reconstituted, or put in turnaround status (Cohen & Moffitt, 2009; Mehta, 2013; Vinovskis, 2009). These developments were a far cry from the One Best System.

We discuss the chief issues that school systems face in the changing environment. Our aim in this essay is to propose considerations for researchers who want to understand those issues. We first examine how U.S. public school systems developed in the late 19th and 20th centuries, because those are the systems, still largely in place, that recent policies aim to change. We then examine leading issues that school systems now face as a consequence of changing environments, and we relate them to extant research on school system organization. We then use that analysis to identify lines of research that would improve understanding of systems of schooling, and we propose a program of research on those systems.

School System Formation and Environments

The chief operating units of U.S. school systems were local educational agencies (LEAs)—that is, governments that were popularly—not professionally—controlled (Goldin & Katz, 2009). One of public education's strengths, often developed under pressure, was to embrace an increasing variety of students and student needs. Another was to create opportunities for second or third chances rather than narrowing access or making life-altering decisions in mid-school career, as European systems did (Powell, Farrar, & Cohen, 1985). The schools' increasingly varied missions—consider vocational programs, honors tracks, Advanced Placement (AP), education for disadvantaged or disabled students, and commercial and secretarial education—seemed to preclude focused system-wide aims or system-wide educational programs (Goldin & Katz, 2009).

As a result, few LEAs developed coherent, system-wide instructional programs or coherent educational infrastructure to support such programs. By “educational infrastructure,” we mean the coordinated roles, structures, and resources that school systems design and use to support and coordinate instruction, maintain instructional quality, and enable instructional improvement (Cohen, Peurach, Glazer, Gates, & Goldin, 2013; Hopkins, Spillane, Jakopovic, & Heaton, 2013; Peurach & Neumerski, 2015; Woulfin, 2015).

One reason, just mentioned, was the development of varied school programs. Another was fragmented guidance for instruction. Though the elements of infrastructure existed (e.g., curricula, assessment, teacher education, and more), they were typically devised and managed by different organizations, most of which were private firms or nonprofits. Coordination was not a priority: The firms and nonprofits had no incentives to relate their products to others and did not do so. There also was little coordination within systems among testing, curricula, teacher education, recruitment, and practice improvement (Cohen & Spillane, 1992). These elements of infrastructure were treated as instruments to be designed and manipulated individually, not as interrelated parts of coherent instructional programs.

There also was little coordination between teaching and leadership: Teachers worked alone in classrooms as principals tried to

buffer them from outside interference. Teachers often worked with many different sorts of advice but with no coherent instructional guidance. Despite intermittent attempts to manage it in some cities, most instructional decisions were left to schools, and principals often left them to teachers (Cohen & Spillane, 1992; Lortie, 1975; Meyer & Rowan, 1978). Individual teachers often decided how and even what to teach. Absent much coordination, teachers drew elements of classroom work from a variety of unrelated sources (Lortie, 1975). Studies of public systems present sparse evidence of oversight, quality control, or concern with improvement of the sort we find in some newer systems (Cohen & Spillane, 1992).

Historically, most efforts to improve instruction focused on one or two isolated components, aiming to improve instruction by professional development alone, better curriculum alone, more teacher education alone, or perhaps combining a few such components. These interventions added up; many schools accumulated a variety of unrelated improvements and came to resemble a species of educational Christmas tree schools (Bryk, Easton, Kerbow, Rollow, & Sebring, 1994). The fragmentation and lack of coherent guidance also meant that teachers had few opportunities or incentives to work together and little common material to discuss. That enabled the persistence of privacy in teaching and instructional improvement (Little, 1982; Lortie, 1975).

Though coherence was quite unusual system-wide, it could occur below the system level.

Some special schools and some high school tracks built consensus on outcomes and common technical cultures. Some subsystems—the AP and International Baccalaureate (IB) programs are the chief cases in point—organized around specific academic objectives and methods offered more demanding academic work for selected students and had more ambitious instruction than was conventional. Their approach to accountability was grounded in subsystems' norms, standards, and their own assessments, not state or local tests. They operated as subsystems within public education, but each belonged to nongovernment systems that were managed by national or transnational organizations (Conner, 2008; Mollison, 2006; Nugent & Karnes, 2002).

Some other nonpublic systems organized around particular religious beliefs or educational philosophies. Catholic, Jewish, and other religious school systems organized around specific religious traditions and related educational values and sought to use those traditions and values to inform educational programs (Bryk, Lee, & Holland, 1993). Montessori schools organize around a vision of human growth and potential and a specified design for curriculum and instruction (Cossentino, 2005). These have been much more single-purpose systems and thus significantly more coherent than conventional, multipurpose public systems, especially those in urban areas, which were created to serve increasingly diverse student populations with varied educational ambitions.

Though coherence was scarce in public education, it has been a significant aspiration. The management ideology that took shape in the early 20th century stressed tight control and managerial influence; if one believed those managers or some historians of the era, school systems were tightly managed in a top-down fashion. Yet there was a distinct tension between that ideology and the realities of decentralization, political competition, and loose

coupling (Counts, 1928; Katznelson & Weir, 1985; Rice, 1893). Urban systems were deeply decentralized, and political machine operatives made key decisions at the ward level. At the same time, mayors, other city officials, and businessmen often tried to use school systems for their own ends. As the aspiring new school system managers tried to wrest control from these contending sets of actors, they voiced aspirations for their influence and system coherence that were at some distance from the turbulent and sometimes incoherent organizational reality.

As the public systems developed through the early 20th century, they gained stability, but only a few seem to have developed the infrastructure that would have enabled them to tightly guide instruction. In that situation, one way that leaders of LEAs legitimated their enterprise was with the “logic of confidence” that John Meyer and Brian Rowan described nearly half a century ago. It had little to do with anyone’s control of schools’ internal operations, let alone evidence of program coherence or student learning. Rather, it focused on signs of good procedure: Students promoted on time through the grades, students graduating, and teachers gaining certification, licensure, and advanced degrees (Meyer & Rowan, 1978; Weick, 1976).²

Why did school systems behave as they did through most of the 20th century, giving little attention either to creating coherent instructional programs or to instructional improvement? Our account has several elements. First, there were growing pressures from the environment to diversify programs and offerings, some from more varied student bodies and others from interest groups and reformers who championed particular programs. Second, the educational instruments that might have helped systems to become more tight-knit and coherent—tests, curriculum, and teacher education chief among them—were either owned by private sector firms that had strong incentives not to cooperate or were managed by higher education institutions that had few incentives to directly serve the needs of the lower schools. Third, there were few pressures from the environment to improve instruction or instructional outcomes, and ideas about improvement focused on what were taken to be face-valid procedures like student promotion or teacher experience or on the funds schools received and the educational resources that money could buy.

From this perspective, what did the term “public school system” mean? In most cases, it referred to state or local jurisdictions that sponsored and managed schools, but it connoted little about their organization, educational aims, or instructional programs, beyond providing education to a growing number and variety of students in state-maintained schools. The term did not refer to organizations that created and managed any particular instructional programs.

Shifting Environments and School Systems

Things began to change in the 1980s, and by the mid-1990s, two new approaches to systems in schooling had taken shape. One was standards-based or systemic reform: Federal and state policies sought to create a new external structure of academic standards, assessments tied to the standards, and school and system accountability for students’ performance on the assessments.

Schools and systems would be judged by student performance outcomes rather than familiar inputs. Schools or systems whose students performed poorly risked losing the legitimacy that earlier would have been secured by such institutional markers as regular grade promotion and certified teachers. The new approach sought to reduce race and class inequality in school outcomes by creating incentives for schools and systems to improve. It did so by creating a common framework for schooling, grounded in academic standards. These policies expressed a version of functional organizational theory.³ States would set goals and decide on outcomes and measures. School systems would align resources to produce those outcomes and improve weak schools (Cohen & Moffitt, 2009, pp. 99–178). Schools and school systems would have incentives to manage instruction much more closely because their legitimacy would depend on it. Action concerning instruction would be more likely to focus at the system level, rather than being delegated to schools and teachers.

The other new approach to system in schooling arose with state and federal policies that created markets for schooling with tuition vouchers, open enrollment, and charter schools. These policies presumed that parents would choose based on school quality and that the competitive pressure for quality would press weaker schools to improve. Markets would drive improvement in much the same manner as standards-based reform: by creating incentives for improved quality (Chubb & Moe, 1991). These reforms were animated by economic ideas, especially the view that only competition would force lethargic public schools to improve.

These were major changes in the schools’ environment, and they had effects. The United States is now populated by a more diverse array of systems and systemic reforms: the Common Core and its testing consortia; turnaround zones; state achievement districts in Tennessee, Michigan, and Louisiana; urban LEA transformation; and charter systems. Several older systems were drawn into this reformation: The IB and AP programs expanded and changed as policymakers and educators searched for ways to improve schooling, especially for students of color or from disadvantaged families (Conner, 2008; Mollison, 2006; Nugent & Karnes, 2002). Catholic parochial schools that serve some inner cities now compete with charter schools that advertise impressive results and cost less (Goldschmidt & Walsh, 2013; Meyer, 2007).

Some of these system-building efforts focus on standards, assessments, and accountability, while others focus on system curriculum, teaching, school management, quality control, and related things. A few seek to connect the two. Competition among schools and systems has grown and, with that, worry about losing students and funds in many older urban public systems (Baker, 2016). Yet these changes built on and in the vicinity of the preexisting school systems. LEAs did not vanish, nor did school board elections, local taxation, neighborhood schools, or the accumulation of federal, state, and local policies and programs. The education sector became more crowded, busy, and diverse, but nothing inherited from the earlier, less coherent era, disappeared. Hence, another effect was that—as has been the American habit with education policies and programs—addition vanquished subtraction.

The Dilemma of System Organization and Reorganization

Our analysis of systems in changing environments highlights a dilemma with which school systems now contend⁴: How do school systems manage environmental pressures to rebuild themselves as more coherent and instructionally effective organizations while managing their inherited differentiated organizations and the environmental pressures that support them?

Prior research on early efforts to rationalize systems and schools suggests that doing so would be no simple matter. For example, a contingency approach suggests establishing ambitions and designs for instruction and then fundamentally reconstructing and coordinating components of educational infrastructure to support those ambitions and designs is challenging (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Newmann & Wehlage, 1995). Yet that would require major changes in systems' internal organization. Systems would have to build consensus on specified outcomes. They would have to develop coherent educational infrastructure with which to connect outcomes and classroom instructional practice. That in turn would require systems to use these developments to establish and coordinate new staffing capabilities and norms for districts and schools (Elmore & Burney, 2002; Johnson, Marietta, Higgins, Mapp, & Grossman, 2014; Stein & Coburn, 2008; Wohlstetter, Datnow, & Park, 2008).

The dilemma arises in part because the environmental press to rationalize systems and schools was not complemented by environmental press and support for making these internal organizational changes. It also arises because legacy institutional pressures for continued internal differentiation and incoherence were not reduced. Hence, a primary challenge for leaders has been to selectively bridge and buffer competing environmental and internal organizational influences as they try to respond to pressures for coherence in systems and schools (Honig & Hatch, 2004; Spillane & Anderson, 2014).

This analysis suggests four domains of activity in which systems are likely to engage as they try to manage the dilemma of pressures to build toward coherence and instructional effectiveness amidst a legacy of incoherence in schools and environments. One concerns outcomes and methods: how to manage pressures to build consensus on system-wide outcomes despite counterpressures that support differentiated outcomes and methods. A second concerns infrastructure: How do systems deal with pressures to build infrastructure to connect system-wide outcomes with instruction when most existing elements of infrastructure have no such connection? A third concerns staff recruitment and training: How do systems deal with pressure to reorganize recruitment to find teachers who have been prepared to teach in ways consistent with standards when LEAs have little influence on teacher preparation programs or the professional development industry? A fourth concerns the environment: how to manage pressures that tie money, political rewards, and public recognition to rebuild systems as coherent and instructionally effective when powerful competing pressures are tied to the inherited differentiated organization.

Each of the four refers to a domain of school system activity in which educators would be likely to engage the dilemma of building toward coherence and instructional effectiveness amidst

legacy incoherence in schools and environments. The four domains are central to the organization and work of school systems, so each identifies pressing concerns in practice. Moreover, each is tied to theoretical issues in school system organization. For these reasons, the four domains of activity are key contexts for research on systems of schooling.⁵ In what follows we discuss each and identify essential research issues. We conclude with a few general remarks about the research program that we envision.

System-Wide Consensus or Differentiated Outcomes?

The changed environment contains significant pressures for consensus on outcomes, but many public systems, especially urban systems, were organized to differentiate programs and outcomes. How do they manage the recent pressure for consensus on outcomes, given their history and organization?⁶ This domain of activity is especially significant in light of support for the differentiated organization in the school systems' environment. IB and AP subsystems, for example, have their own distinct outcomes and significant constituencies within and outside of school systems. There also are groups whose political and educational interests are tied to educational specialties like vocational education, or the education of disadvantaged students. School systems get significant federal and state monies to educate students with disabilities, or disadvantaged students. Each supports part of the internal differentiation of public school systems and associated outcomes.

Recent environmental pressures for consensus on outcomes were layered on top of that differentiation and the environmental pressures that support it. Functional organizational theories would expect localities to accept new standards and assessments and attempt to rebuild around them; some recent reports are consistent with this expectation (Austin, Grossman, Schwartz, & Suesse, 2006; Weast, 2014). Institutional theory would expect school systems to accept tests and standards but adjust them to avoid rebuilding, to accept the new outcomes but avoid serious rebuilding, or to otherwise work around the requirements; some recent reports are consistent with this expectation as well (Yurkovsky, 2017). Since the environment is dynamic—it varies among and within states and over time—each response appears to have worked in some places and times but not others. It is likely that many systems, especially those not in older urban areas, avoid either of these alternatives.

A small number of charter systems, by contrast, organized around the outcomes that standards-based reform created. They do not cater to the varied student needs and interests that are familiar in conventional public systems, and they have no history of internal differentiation. Most charters therefore have an advantage over public schools that must educate everyone in their jurisdiction.⁷ At the same time, that advantage has limits. Charter schools cannot avoid the environment: They must hire some teachers from institutions in that environment, and they must deal with programs that are essential to their existence, like the Elementary and Secondary Education Act (ESEA) Title I, which are rooted in the environment. If they try to educate students with disabilities, they encounter the Individuals with Disabilities Education Act (IDEA), another major element in

the environment. The general point here is that when charter schools compete with public schools, both systems operate in the same environment, and hence the charter systems are shaped in part by that environment and by the public systems with which they compete. A third limit is that the environment is dynamic; as public discontent grew over aggressive No Child Left Behind (NCLB)-era testing for standards-based reform, it reinforced concern about testing in high-performing charter systems. Several of these systems have begun to consider moving away from the testing regime (Green, 2016).

The overarching question for research is how school systems manage this domain of activity in response to the dilemma of coherence-building amidst the legacy of incoherence. If public systems attempt to build consensus on outcomes, how do they decide on outcomes and how do they try to build support, internally and in their environment? What social and educational resources do they require, and what influences their success or failure? How have charter schools used the pressure for performance to define their mission and manage their environment, and how do they deal with growing opposition to testing? If public systems do not try to build consensus on outcomes, how do they decide and manage pressure for change?

Build Common Infrastructure But Maintain Fragmented Instruments?

A second domain in which school systems are likely to encounter the dilemma is: how to build infrastructure to connect standards-based outcome measures with instruction when most existing elements of infrastructure have no such connection. Standards and assessment may provide a frame that could inform decisions about curriculum, but they are far from being curriculum. Creating curriculum that is consistent with standards is one step in building infrastructure that could connect system-wide outcomes with instruction (McDonnell, 2017).

That is much more easily said than done, because very few school systems have had the capacity to devise curriculum; this assignment, along with determinations about the extent of “alignment,” has been left mostly to the private firms that publish curriculum. Another step in connecting new standards and assessment to instruction is to devise ways to help teachers learn to use new curriculum to achieve aims that are embodied in standards and assessments. This also is much more easily said than done, because very few school systems have had the capacity to educate or reeducate teachers. That typically was left to institutions of higher education or private firms that offer professional development. Many studies report that neither set of organizations have attended closely to helping teachers learn to teach, let alone learn to teach specific academic subjects effectively (Cohen & Hill, 2001; Garet, Porter, Desimone, Birman, & Yoon, 2001; Porter, Garet, Desimone, Yoon, & Birman, 2000; Wilson, Floden, & Ferrini-Mundy, 2001). Still another step in connecting new standards and assessments to instruction is to devise specific plans for instruction, using curriculum, assessments, and other resources to devise streams of daily work that will accomplish the aims set out in the standards. Teachers are familiar with making lesson plans, but grounding them in a standards-referenced curriculum and tying them to the academic

aims set out in standards has not been familiar. It is not likely to be something that most teachers could do without a good deal of assistance.

If one reason this work would be difficult is its unfamiliarity and the weak capacity it would encounter, another is that the organizations that produce curriculum, professional development, and other services lie outside the control of public education. Curriculum and materials, teacher education, assessments, and professional development are created and marketed by profit-making firms or nongovernment organizations. Can local school systems require these firms and NGOs to develop the infrastructure that they never had to create? Could they push them to “align” their products and services?

Several public systems contrived versions of coherent educational infrastructure, as have some charter systems. Several other systems—Montessori, AP, and IB—built infrastructure as a key part of their formation. These things are roughly what functional organizational theorists would expect. There are a few studies of LEAs that built coherent infrastructure and used it to improve instruction in particular school subjects, and suggestions that other districts may have done something similar (Polikoff, 2015; Polikoff & Porter, 2014; Spillane, Hopkins, & Sweet, 2015; Spillane, Shirrell, & Hopkins, 2016). Some public systems seem to have done what institutional theorists would expect: accept consensus on outcomes but do little more, leaving it to teachers and others to make whatever connections to instruction they might (Hamilton, Stecher, & Yuan, 2012; Payne, 2008). Several thousand other LEAs took an unusual step: contract with school improvement agencies—Comprehensive School Reform Designs—so that these agencies could help high-poverty schools to build infrastructure and improve instruction (Cohen et al., 2013).

There are several questions for research: How do school systems that attempt to build coherent infrastructure do that work? Can they find the technical, professional, and educational resources? If so, where, and if not, why? If they find the resources, how do they define and organize coherence? How do systems that do little or nothing to build coherent infrastructure manage instruction and environmental pressures for improvement? Why do some school systems attempt to build coherent infrastructure, while others do not, even though they reside in the same state?

Create Common Recruitment and Training Amid Fragmented Guidance?

A third domain in which school systems are likely to encounter the dilemma of coherence-building amidst the legacy of incoherence is how they manage pressures to reorganize staff recruitment and training to support improved outcomes, given their long-standing weak influence on training and established patterns of recruitment to differentiated systems. LEAs have had very limited ability to influence teacher preparation; rather than creating their own teacher preparation programs, they have generally managed with the teachers they get from higher education. Though some charter systems (i.e., IB, Montessori, and others) recruit teachers to specific visions of schooling and train them to work with specified instructional systems, public systems face distinctive problems. As we noted earlier, their development as internally differentiated organizations meant that they could not recruit teachers to a coherent system of

instruction. Teacher education itself inhibits such recruitment and training, for it has been organized around preparing intending teachers to teach specific academic subjects and/or to teach students with disabilities, or vocational education. This holds for elementary as well as secondary teacher education.

One question for research in this domain is how public school systems manage pressures to recruit and train teachers for coherent instructional outcomes when their influence on teacher education and professional development has been weak. A similar question might be put to central city Catholic schools, as they deal with pressure from both standards and assessments and competition from charter schools. If any of these systems do devise means of common recruitment and training, how to they do it, and what social, educational, and political resources seem to be required? If they do not, what explains that?

Manage Differentiated Environments for Coherence?

School systems are also likely to encounter the dilemma in a way that cuts across all of the domains we have discussed: They face environmental pressures for coherent, improved instruction and school outcomes, yet their organizations and environment also contain powerful pressures for differentiated programs and organization. This conflict is fundamental, because school systems are open systems and depend on their environments for students, funds, political support, guidance, and legitimacy, among other things. Yet they operate in a complex and pluralistic institutional environment that contains different and often divergent pressures for action. Whether public or private, religious or secular, large or small, these systems are tied to the environments in which they subsist, and they must manage problems that arise in that relationship. Each system, for instance, must define and sometimes revise a mission that finds support in the environment. It must recruit a clientele, and sometimes limit or broaden it. It must raise the money needed to operate and sometimes find new revenues. It must comply with prevailing educational norms, standards, and laws, and navigate the myriad political pressures that populate the education sector. It must deliver on the educational promises it makes to families, students, and its public. As they deal with each of these, systems manage their legitimacy as educational enterprises, for losing clientele, failing to raise revenue, or violating norms can threaten it (Kraatz, 2009; Spillane & Anderson, 2014).

One inference from this is that school systems' efforts to manage those environments are tied to their most central concerns. It is relatively familiar that nongovernment systems manage problems of finance, political support, and legitimacy by recruiting students and staff who accept their missions and instructional regimes. But urban public systems have tried to solve the same problems by offering an increasing variety of educational programs and courses to suit the increasingly varied students and conceptions of students' needs that they serve.

Another inference is that these systems are sensitive to change in their environment. Policies that mandated annual testing, publication of scores, and school and system accountability broke a taboo and secrecy about test scores that public school systems had maintained for the better part of a century. The result, as intended, provided a basis for comparing schools and

systems, which introduced or increased competition among systems for students and funds. That proved to be an advantage for a few urban charter systems that organized to produce impressive state test scores, but it has been a challenge for many central city public systems, and perhaps for inner-city Catholic systems, that never had organized to produce such scores. For generations, they had been accountable for the resource inputs—books, qualified teachers, class size, and much more—that were thought to be significant elements of quality in education, and for evidence that processes like grade promotion and graduation were on track (Meyer & Rowan, 1978). They had been pressed to operate more specialized programs for subgroups of students, but they had not been given the educational and human resources to make those programs effective at scale. The newer policies were layered on top of system differentiation and associated environmental pressures that rewarded school systems for opening access to more students and creating specialized programs.

These systems contend with strong cross-pressures. Several high-performing urban charter systems gained students and philanthropic largesse, but the central city systems with which charters competed gained only worry about the loss of students and revenue, as some of their schools were designated as “failing” (Baker, 2016). That struck some as evidence that the schools had broken the system's promise to students, families, and the public and threatened the system's legitimacy. At the same time, there is increasing controversy and doubt about the validity of standardized test scores as measures of school systems' effectiveness; that has been a challenge for charter systems whose reputation, finance, and legitimacy are tied to performance on those tests.

One research issue is how systems manage the definition of their missions, their efforts to recruit students and teachers, their search for stable funds, and their legitimacy in the changing environment. Another is whether, as our preliminary analysis suggests, there is a common set of environmental problems that all school systems manage. Still another issue concerns the strengths and weaknesses of different approaches to managing those problems. And another still is how these systems try to revise environments to support their existence.

Notes Toward a Research Program

We sketched a research agenda because the developments discussed above are of great importance to school systems of all sorts, but especially to public systems and U.S. schoolchildren. A carefully designed and executed program of research would be useful to practitioners, as they cope with the problems that cluster around the dilemma. It would improve understanding of systems as organizations. And it would improve understanding of how school systems deal with their central mission of instruction and instructional improvement. Further, studying multiple systems would help us better understand the interdependencies among them.

In addition to the points of focus that we just sketched, such a research program should have several important features.

The research should be informed by a coherent conceptual frame. Such a frame should have several elements. It should focus on the intersection of instruction and organization. It

should envision school systems as open systems that are vulnerable to and depend on their environments. As these points imply, the frame should attend to the interaction between managing externally (their environment) and managing internally (staffing, consensus building, and instruction). The chief points of comparison should include how systems define, design, organize, and improve instruction.

The system should be the unit of analysis, and the research should compare among systems. Systems should be selected purposefully to share some common functions but represent different types (see Alexander, Broadfoot, & Phillips, 1999).

The systems to be compared should be located in the same political and geographic environments, not only to control demographic and political variation but also to illuminate the possible interdependencies among different systems in the education sector, in everything from competition for students to the quest for legitimacy.

We understand that we propose these ideas in a research environment that has had a very different orientation. Innovation has usually been understood as a targeted activity, with little attention to the complex organizations in which innovations operate, let alone to the possibility that innovation can occur at the system level. There has been very little research that compares across school systems in the United States: Most research has been situated within a single type of school system, rather than comparing central issues or functions across systems. Perhaps most important, with a few exceptions, research on improving instruction has not attended to the role that systems play in defining, designing, organizing, and improving instruction. Though some might see these as impediments to the sort of research that we sketch here, we see them as powerful reasons to consider and undertake such work. This article expresses our understanding as we are in the midst of data collection and analysis in the study that gave rise to the literature review and analysis reported here. We would not be surprised if some things change as we continue the work.

NOTES

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¹But recent research presents a different view (see Downey, Von Hippel, & Broh, 2004).

²New institutional theory offered an alternative to the functional conceptualization of how organizations worked, challenging the rational actor model and instead attending to cognitive and cultural influences on organizational behavior that go beyond the individual as the unit of analysis (see DiMaggio & Powell, 1983; Scott, 1995; Weick, 1976).

³For a synthesis of the foundations and development of classical functional/rational organizational theory, see Scott and Davis (2015). See Mehta (2013) and Peurach (2011) for analyses of these policies as

efforts to rationalize public education at the system and school levels.

⁴A dilemma is a problem offering two possibilities, neither of which is unambiguously acceptable or preferable (<https://en.wikipedia.org/wiki/Dilemma>).

⁵It may be that additional domains (e.g., budgeting and allocating resources, maintaining and structuring physical space, etc.) are being or will be rethought. We focus on these four for the reasons given.

⁶In our usage, “manage” is equivalent to “deal with” or “cope.”

⁷There are exceptions to this: for example, charter schools that enroll large numbers of special education students, which begins to drive differentiation of the sort the has long existed in public schools (see, e.g., National Center on Special Education in Charter Schools, 2017).

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AUTHORS

DAVID K. COHEN, PhD, is the John Dewey Collegiate Professor of Education and professor of education policy at the University of Michigan, 610 E. University, Ann Arbor, MI, 48109, dkcohen@umich.edu,

and visiting professor at the Harvard Graduate School of Education. His current research concerns the organization of school systems, the nature of teaching, and the effects of reform.

JAMES P. SPILLANE, PhD, is the Spencer T. and Ann W. Olin Professor in learning and organizational change at Northwestern University, School of Education and Social Policy, 2120 Campus Drive, Evanston, IL 60208; j-spillane@northwestern.edu. His research focuses on issues of education policy, policy implementation, school reform, and school leadership.

DONALD J. PEURACH, PhD, is an associate professor of educational policy, leadership, and innovation at the University of Michigan, School of Education, 610 E. University, Ann Arbor, MI 48109; dpeurach@umich.edu. His research examines the production, use, and management of knowledge in practice in the context of large-scale, network-based educational improvement initiatives.

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