

Chapter 2

From Mass Schooling to Education Systems: Changing Patterns in the Organization and Management of Instruction

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In the early 1990s, the logic and policies of systemic reform launched a press to coordinate the pursuit of excellence and equity in U.S. public education, with each other and with classroom instruction. There was little in that policy moment to predict that these reforms would sustain, and much to predict otherwise. Yet, nearly three decades hence, many public school districts are working earnestly to pursue the central aims of the reforms: all students engaging rich instructional experiences to master ambitious content and tasks at the same high standards. That begs a question: What happens when new educational ambitions collide with legacy educational institutions—not in a policy moment but across a historical moment? This chapter takes up that question by reviewing the rise of mass public schooling in pursuit of universal access, a historic pivot toward instructionally focused education systems in pursuit of excellence and equity, and changing patterns in instructional organization and management that follow. The lesson we draw is that, even amid incoherence and turbulence in education environments, sustained public, political, and policy support for new educational ambitions opens up new opportunities for those ambitions to manifest in the structures and the work of public school districts.

Every now and then, it's a good idea to take stock of where you've been, where you are, and where you might be headed. We think that now is a very good time to do exactly that.

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Over a quarter century ago, two of us published a chapter in the 18th volume of the *Review of Research in Education* examining the relationships between policy-and-practice and governance-and-instruction (Cohen & Spillane, 1992). The chapter was published soon after the logic of systemic reform was taken up in federal education policy (Smith & O'Day, 1991).

That policy moment in the early 1990s launched a press to coordinate the pursuit of excellence and equity in public education, with each other and with classroom instruction. The logic and policies of systemic reform aimed to push public education beyond didactic pedagogies, basic facts, and rote skills toward ambitious instructional experiences and outcomes for *all* students. They also aimed for more coherent, powerful guidance for instruction from state and federal agencies in the form of curriculum frameworks, performance assessments, accountability standards, and professional preparation.

Yet these aims were complicated by two sets of problems. One set arose from the distribution of power and the inattention to instruction in U.S. public education. By the onset of systemic reform, public education had evolved as a mass schooling enterprise that provided universal access to schools but delegated primary responsibility for organizing and managing classroom work to teachers. Another set arose from the demands of ambitious instruction on those habituated to the pursuit of basic skills and rudimentary knowledge and, thus, on the supports needed to move beyond access to excellence and equity in classroom work.

The earlier chapter offered a prediction. Absent complementary efforts to reduce existing sources of influence, efforts at the federal, national, and state levels to guide instruction in more coherent, powerful ways would breed further incoherence in education environments and, with that, complicate (rather than support) the pursuit of ambitious instruction. Gerald Grant, editor of the 18th volume of the *Review of Research in Education*, described this predicament as “profoundly pessimistic” (Grant, 1992, p. xi).

Our prediction of further incoherence has held. The logic of systemic reform has evolved into the logic of standards-and-accountability and been institutionalized in federal, national, and state policy. The logic of standards-and-accountability, in turn, has played out in interaction with the logics of markets-and-choice, research-and-evidence, and autonomy-and-professionalism to create new sources of influence in education environments, to redistribute influence among existing sources, and to exacerbate incoherence in instructional guidance.

Even so, an unanticipated development also appears to be emerging and, with it, cautious optimism. Many public school districts are working earnestly to move beyond mass public schooling to instructionally focused education systems pursuing the central aims of systemic reform: all students engaging rich instructional experiences to master ambitious content and demanding tasks at the same high standards.

And that's what has us thinking that now is a good time to take stock of where we've been, where we are, and where we might be headed.¹ We tackle the issues in four chunks. We begin by examining the rise of mass public schooling in pursuit of universal educational access. We continue by examining this historic pivot toward instructionally

focused education systems in pursuit of excellence and equity in students' educational experiences and outcomes. We then examine changing patterns in the organization and management of instruction that follow. To conclude, we offer summary reflections, along with thoughts on further research that would both produce basic knowledge about the shift from mass schooling to education systems and support districts and schools in this work.

Covering so much ground in so few pages is like using a broad brush to paint a landscape on a postage stamp. Yet the resulting image is sufficiently vivid to get a clearer sense of what happens when new ambitions collide with legacy institutions—not in a policy moment spanning years but across a historical moment spanning decades.

FROM MASS PUBLIC SCHOOLING . . .

By “mass public schooling,” we mean a government-sponsored enterprise that provides education for large numbers of students. Thus defined, the central function of mass public schooling is to afford instruction of some sort, to many students of some sort, in a school of some sort, to learn something of some sort, specifics of which are to be worked out in and through government agencies and others operating in the public sphere.

In the United States, from the nation's founding through its bicentennial, mass public schooling was a success, in that it expanded over time to provide access to K–12 schools for virtually all students. It was a curiosity, in that the government agencies and others responsible for working out the many specifics directed comparatively little attention to the central educational function of mass public schooling: the day-to-day work of classroom instruction. And it was a problem, in that this central educational function turned out not to work in ways that many people assumed.

Ambitions for Educational Access

The rise of mass public schooling in the United States was driven by expanding societal ambitions for access to public education. These ambitions had roots in the colonial New England, with requirements that local communities establish public schools to teach students (primarily White boys) to read and write to understand the Bible, contracts, and laws (Cremin, 1970). Ambitions grew with associations between public education and the moral foundation, social order, and economic advance of a functional democracy; the advent of compulsory attendance and child labor laws; and urbanization and mass immigration, and the need to socialize millions of new citizens (Graham, 1974; Mirel, 2010; Tyack & Hansot, 1982).

Yet a fundamental matter that drove the expansion of societal ambitions was the association of public education and social equality. In a new nation in which the roots of public education had quickly become entangled with differences in gender, class, ethnicity, and race, the common school movement of the mid-1800s sought to advance equity in public schooling for boys and girls, in urban and rural schools (Kaestle, 1983). As Horace Mann, father of the movement, famously argued:

“Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men—the balance-wheel of the social machinery” (Mann, 1848).

But with racism, xenophobia, and sexism both deeply institutionalized and long leveraged to limit access to public education, it was not until the 1970s that the United States realized ambitions for universal access to K–12 public schooling (Katznelson & Weir, 1985). This success was a positive outcome of social movements, court decisions, and federal policies of the 1940s to 1970s that sought equitable access to public education for students historically discriminated against on the basis of gender, religion, race, ethnicity, social class, and/or disability (Anyon, 2009). Chief among these were the civil rights and disability rights movements; *Méndez v. Westminster School District of Orange County* in 1947; *Brown v. Board of Education of Topeka* in 1954; *Lau v. Nichols* in 1974; the Elementary and Secondary Education Act of 1965; and the Education for All Handicapped Children Act of 1975.

Yet the assurance of universal access to public education did not bring with it the assurance of quality or equality in students’ educational experiences and outcomes. Rather, court decisions and federal policies of the 1940s to 1970s focused chiefly on ensuring a “free appropriate public education” and a “basic floor of educational opportunity” for all students, absent accountability for results (*Board of Education v. Rowley*, 1982). The chief means of doing so was the equitable distribution of educational resources among schools, including funding, teachers, materials, and time.

From the origins of public schooling through the realization of universal access, reformers, educators, and society writ large assumed that if students were exposed to teachers and books in schools, they would learn. Public schooling was invented at a time when most Americans assumed that the mind was shaped by its circumstances. If so, it could be shaped by man-made institutions like schools. On these assumptions, if governments built schools, supplied them with teachers and books, and made sure students attended, students would learn. And if governments supplied schools with more and better teachers and books, students would learn more and better.

Few gave much consideration to what, in hindsight, presents as a fundamental matter: Differences that resources make in students’ educational experiences and outcomes depend on uses to which those resources are put in day-to-day classroom instruction (Cohen, Raudenbush, & Ball, 2003). By this reasoning, if resources are used well, prospects for students’ learning improve; if they are not used well, prospects diminish. But by the reasoning of the day, to provide resources was to provide education; resource allocation would cause teaching and learning. That was how the educational function of public schooling was widely assumed to work.

Establishing and Structuring the Enterprise

Ambitions for universal access to public schooling rose in interaction with efforts of the federal and state governments to structure the environments of public education to bring order to influences bearing on the establishment, resourcing, and activities of schools. Characteristic of nation-building, the efforts to structure education environments included formidable investment in macro-level

infrastructures: foundational governance, financial, administrative, and legal arrangements at the federal and state levels as the backbone of a mass public schooling enterprise.

Yet public schooling emerged as a local undertaking in a new nation distrustful of central authority and designed to limit the power of central governments, with no constitutional authority over public education at the federal level and with rudimentary engagement in substantive educational matters at the state level. With that, among those established by central governments, two macro-level infrastructures were noticeably absent (Cohen, Peurach, Glazer, Gates, & Goldin, 2014; Cohen, Spillane, & Peurach, 2018). One was a centrally established educational infrastructure providing specific visions and designs for instruction, formal resources for instruction (e.g., content frameworks, curriculum materials, and assessments), and social resources for instruction (e.g., teachers). Another was a centrally established accountability infrastructure setting out standards for students' learning, means of measuring performance in relation to those standards, and incentives and sanctions tied to metrics and standards of performance.

Instead, a different type of macro-level educational infrastructure emerged, shaped only in part by agencies of federal and state governments. Societal visions for public schools came to focus less on their educational function and more on their organizational form: a socially shared image of a "real school" featuring age-graded classes, one teacher per classroom, content drawn from academic disciplines or vocations, and a school day that ran from 8:30 a.m. to 3:00 p.m. (Metz, 1989). The development of essential resources fell largely to a "school improvement industry," with commercial publishers, nonprofits, and other organizations developing formal resources for instruction and accredited colleges, universities, and other organizations developing teachers (Rowan, 2002; see also Peurach, Cohen, & Spillane, *in press*).

A different type of macro-level accountability infrastructure developed, as well, defined less by the specific actions of federal and state agencies and focused less on examining instructional effectiveness. Rather, this accountability infrastructure was defined more by societal understandings of schooling and focused more on according legitimacy and resources to schools through their compliance with structural forms and categories recognized and valued by society. John Meyer and Brian Rowan (1978) described this as the "schooling rule":

Education is a certified teacher teaching a standardized curricular topic to a registered student in an accredited school. The nature of schooling is thus socially defined by reference to a set of standardized categories, the legitimacy of which is publicly shared. (p. 219)

By this argument, the social value of schooling was more in its credentialing function (i.e., categorizing graduates) and less in its educational function (i.e., actually teaching them anything of substance and use).

As ambitions for educational access expanded deep into the 20th century, so, too, did education environments (Cohen & Spillane, 1992; Rowan, 2002). Federal and

state agencies engaging public schooling grew. The school improvement industry grew, too, with more interests and organizations advancing more visions of a “real school,” more formal resources for instruction, and more professional learning opportunities for teachers. As the press for equitable access grew, so, too, did the press for equitable distribution of resources among schools. And as more historically marginalized students were incorporated into public schools, the categories used to describe their educational needs grew: for example, behaviorally challenged, language impaired, physically impaired, and learning impaired.

Within the constraints and affordances of these plural, fragmented education environments, responsibility for working out the educational specifics fell on public school districts: local units of government operating under elected boards and responsible for funding, establishing, and operating public schools (Gamson & Hodge, 2016; Tyack, 2002). Public school districts evolved to take a conventional, hierarchical form: geographically defined enterprises featuring a central office and feeder patterns of elementary, middle, and high schools. The work of those leading these central offices and schools (i.e., superintendents, principals, and their associates and assistants) evolved, as well, to fall into three broad categories (Cuban, 1988):

- Political responsibilities focused on managing relationships with the school board, local constituents, and other units of government
- Administrative responsibilities focused on financial, operational, logistical, and bureaucratic functions
- Educational responsibilities focused on organizing and managing instruction

Political and administrative responsibilities drew much of the time and attention of local educational leaders; educational responsibilities drew far less. Many matters conspired to make this the case: for example, the time demands of political and administrative work, the limited instructional knowledge of local educational leaders, the desire of local educational leaders to legitimize themselves by identifying with the political and administrative work shared with other government and business leaders, tensions between management (i.e., leaders) and labor (i.e., teachers and teachers’ unions), and distrust of central authority in district offices and schools that mirrored distrust in broader American society (Callahan, 1964; Cohen, 1985; Goodlad, 1978; Tyack & Hansot, 1982).

Chief among these matters was that public accountability for leaders’ political and administrative responsibilities were much stronger than for their educational responsibilities. Local constituents expected their voices to be heard and their financial contributions to be used efficiently. Yet there was often little agreement among local constituents on the desired outcomes for schools, instructional methods, or means of measuring effectiveness. Within a given district, diversity in social class, race, ethnicity, and religion brought diversity in educational aspirations and values (Powell, Farrar, & Cohen, 1985). The matter of what to teach, how to teach, and toward what ends was contested at the societal level, as well, with basic facts and skills and didactic

pedagogies as a détente, and with that détente mirroring anti-intellectualism in broader American society (Hofstadter, 1963).

While some leaders took on the responsibility of devising coherent, coordinated educational and accountability infrastructures at the local level, many public school districts evolved in ways that mirrored education environments, with weak, uncoordinated educational and accountability infrastructures to guide instruction and to assess effectiveness. As education environments became increasingly elaborated and communities more diverse, so, too, did the educational and accountability infrastructures of public school districts, with elementary schools likened to educational Christmas trees and high schools likened to shopping malls (Bryk, Sebring, Kerbow, Rollow, & Easton, 1998; Powell et al., 1985).

The Organization and Management of Instruction

Thus, in the United States, the rise of mass public schooling resulted in a curious state of affairs, with agencies of governments (federal, state, and local) and others in the public sphere doing little to work out the specifics of what was, ostensibly, the primary educational function of public schooling: the day-to-day work of classroom instruction. Put differently: U.S. public education had evolved as an enterprise characterized by access-oriented mass public schooling; it had not evolved as a collection of instructionally focused education systems among or within states.

But it wasn't that classroom instruction was *un*-organized or *un*-managed. Rather, it was that instruction was organized and managed, again, differently: only partially by government agencies and others in the public sphere and more by the street-level agents of governments—classroom teachers.

Working within the conventions of a “real school” absent accountability for student learning, public school districts organized and managed instruction primarily by constituting it: that is, by sorting students into schools, grades, tracks, classes, and supplemental/categorical programs; resourcing those instructional venues with certified teachers, curriculum materials, and other educational materials; and promoting students annually based on age and attendance (Cohen, 1985; Oakes, 1985). Beyond this type of administrative sorting and resourcing, the educational work of central offices and schools often stopped at classroom doors. Much of the educational work of public schooling was organized and managed in individual classrooms, with teachers delegated primary responsibility for collaborating with students and families to work out the educational specifics using the resources afforded them (Dreeban, 1973; Jackson, 1968; Lortie, 1975).

The result was a “loose coupling” between the political and administrative work of central office and school leaders, on one hand, and the educational work of teachers and students in classrooms, on the other (Meyer & Rowan, 1978). This pattern of instructional organization and management worked for many people. It allowed local educational leaders to respond to the societal press for mass public schooling and, with that, to associate with the professional managerial class. It allowed teachers to exercise discretion and judgment in organizing and managing their own work and,

with that, to identify as human service professionals. It allowed students and families to fashion a public education aligned with their own educational aspirations and values. And it accommodated a broader society in which educational means and ends were contested.

This pattern of instructional organization and management also made sense, given common assumptions about the educational function of schooling: If schools were built, supplied with teachers and books, and students attended, then students would learn. This was the common sense of citizens voting on local operating levies, of state legislators voting on school aid appropriations, of campaigns for universal attendance and against school dropouts, and of researchers who generated evidence associating greater resource allocation with greater educational attainment. From this perspective, it is easy to see why so much education policy—local, state, and, later, federal—had focused on resource allocation and attendance. It is also easy to see why few educators, reformers, or policymakers saw difficulty with these policies, worried about outsourcing a great deal to nongovernmental organizations, or even recognized fragmentation and incoherence in educational and accountability infrastructures.

But even if it worked for (and made sense to) many people, this pattern of instructional organization and management was also deeply problematic. The problems began in central offices and schools. While many historically marginalized students experienced quality educational opportunities, many others found their basic floor of educational opportunity lowered by the sorting of students into neighborhood schools segregated by race, ethnicity, and class; by assignment to low-level academic and vocational tracks; and by placement into remedial supplemental/categorical programs (Gamoran & Mare, 1989; Oakes, 1985). Resourcing often exacerbated these problems, with more poorly trained and less qualified teachers often overrepresented in districts, schools, and academic tracks serving large numbers of historically marginalized students (Lankford, Loeb, & Wyckoff, 2002; Jacob, 2007). Those teachers worked absent coherent guidance for practice, support from leaders, or accountability for much more than maintaining order.

The problems continued with the delegation of responsibility for instructional organization and management to individual classrooms. One matter was that by the standards of other human service professions, the professional preparation of teachers was widely regarded as weak and lacking a shared professional knowledge base to support and coordinate the exercise of judgment and discretion (Dreeban, 1973; Jackson, 1968; Lortie, 1975). Moreover, working in the privacy of their own classrooms and structurally isolated from colleagues, teachers had little opportunity to learn to coordinate and use the often incoherent and uncoordinated educational resources afforded them for their day-to-day work with students (Little, 1990). Instead, teachers often refashioned new resources to support existing ways of working or simply rejected them, carrying on largely as they, themselves, were taught: by focusing on basic facts and rote skills using didactic pedagogies (Cohen, 1990; Cuban, 1993; Lortie, 1975).

Challenges overcoming weaknesses in professional knowledge were exacerbated by the organization and management of districts as a whole. These were enterprises that appeared expertly designed to undermine collegial learning: hierarchical, bureaucratic, geographically distributed enterprises lacking mechanisms for the lateral exchange of knowledge among schools, the reciprocal exchange of knowledge between schools and central offices, and the accumulation and redistribution of knowledge by central offices (Glazer & Peurach, 2015).

Ironically, problems in the organization and management of instruction were exacerbated by a press to improve educational quality, by moving beyond a focus on basic facts and rote skills to a focus on complex thinking, reasoning, and problem solving. The press ran from the 1950s into the 1970s, roughly in parallel to the press for universal access, motivated by the security and economic threats from abroad, the cognitive revolution (and its influence on education), and growing debates about instructional methods and quality.

But new ambitions to improve educational quality ran into and through the institution of mass public schooling. Concerns with educational quality drove the development of a federally supported “innovation infrastructure” featuring agencies, institutes, centers, laboratories, grant-funded projects, and clearinghouses, thus further balkanizing macro-level educational infrastructures that produced still more resources lacking in guidance, supports, and accountability (Peurach, Penuel, & Russell, 2018). These new resources were disseminated to districts and schools that were creating new sorting mechanisms that often further segregated students by race, ethnicity, and social class: for example, magnet schools, gifted and talented programs, and college preparatory academic tracks. And new curricula, materials, and other instructional resources were allocated to classrooms where teachers, again, either rejected them or refashioned them, whether to support established instructional approaches or to develop some combination of the old and the new (Cohen, 1989, 1990; Dow, 1991).

Despite these problems, this pattern of sorting-resourcing-and-delegating persisted. One reason is that exposure to resources can yield returns, as evidenced by research associating resources and educational attainment (Greenwald, Hedges, & Laine, 1996). Yet, while resource allocation is an essential condition for instruction, it neither controls nor determines instruction. Much depends on how schools, teachers, students, and others use resources. The partial truth, commonsense power, and political pervasiveness of the ideas underlying this pattern of sorting-resourcing-and-delegating—along with the centuries-long investment of government and educators in it—greatly complicated even recognizing problems with it, never mind disrupting them.

While hard for many to see, the problems were more transparent to others. From the late 1800s into the mid-1900s, champions of the progressive education movement challenged public schools as sorting mechanisms serving economic purposes and sought to reform them as egalitarian foundations for democratic participation (Cremin, 1964). Yet it was seminal social research of the 1960s and 1970s—the first of its kind to combine big data, new statistical methods, and massive computational

power—that provided evidence of a formidable average achievement gap between Black and White students, questions about the relationship between educational resources and student achievement, and arguments that schools were doing little to reduce achievement disparities among students (Coleman et al., 1966; Jencks et al., 1972). Subsequent research on determinants of resource use (e.g., teachers’ knowledge, opportunities for practice-based learning, and instructional leadership) would soon reveal how much had been missing in common assumptions about how the educational function of schooling worked.

Thus, by the 1970s, a press for mass public schooling that had gained currency with the common school movement had yielded “one best system”: a dominant pattern of instructional organization and management stitched deeply into the institutions and culture of American society but one that was also bound up with questions about U.S. public education as the great equalizer (Tyack, 1974). The progressive education movement had stalled, owing to the absence of both the understandings and infrastructures needed to realize its ambitions in classrooms. The press for universal access and for educational quality were working in tension with each other, and in weak relation with instruction: Many historically marginalized students were experiencing instruction of questionable quality, while efforts to improve quality were reinforcing the pattern (and the problems) of sorting-resourcing-and-delegating. And evidence challenging common assumptions about the educational function of public schooling was increasingly plain to see.

... TO INSTRUCTIONALLY FOCUSED EDUCATION SYSTEMS

By an “instructionally focused education system,” we mean a mass public schooling enterprise that takes on, as a central matter, guiding and supporting the educational work of schools: classroom instruction. What moves an instructionally focused education system beyond mass public schooling is how the enterprise works out the specifics of teaching and learning. An instructionally focused education system is not an enterprise in which government agencies and others constitute instruction and, then, delegate to individual teachers primary responsibility for organizing and managing their day-to-day work in ways (and toward ends) that they, themselves, determine. Rather, an instructionally focused education system is one in which government agencies and others operating in the public sphere interact in mutually reinforcing ways to organize and manage instruction in and among classrooms in pursuit of agreed-upon ends. By this definition, an instructionally focused education system *is* a mass public schooling enterprise, and much more.

From the 1980s to the present, the U.S. public education enterprise has shown signs of moving beyond mass public schooling toward instructionally focused education systems, in the direction of agreed-upon ends that, historically, had been elusive: improving the quality of educational experiences and outcomes for all students while, at the same time, reducing disparities among them. This movement has played out in and through the established architecture of mass public schooling: expanding (but still limited) federal and state engagement in the educational work of public

schooling, a continued (if not increased) dependence on the school improvement industry for essential formal and social resources, and public school districts still bearing primary responsibility for working out the educational specifics. The result is new ambitions colliding with legacy institutions, with new questions about instructional organization and management emerging from the fray.

Ambitions for Excellence and Equity

In the United States, the shift toward instructionally focused education systems has been driven by expanding societal ambitions: beyond *universal access* to public schooling to *excellence and equity* in public education—not as parallel pursuits and in tension but as coordinated with each other and, together, with classroom instruction.

As discussed above, these ambitions have roots in reform movements, social movements, and policy movements running into the 1960s, and these ambitions have expanded in the time since. But to say that excellence and equity were (and are) emerging as broad societal ambitions is not to say that there is social consensus on the meaning of “excellence” and “equity” or on how best to realize those ambitions. Rather, such matters were (and are) widely contested. After all, these broad societal ambitions are emerging in and from a distributed, decentralized, plural national education enterprise accustomed to accommodating and institutionalizing educational differences and unaccustomed to establishing and pursuing shared educational understandings, purposes, goals, and approaches.

One marker of the expanding, coordinated press for excellence and equity is a set of movements, court decisions, and policies with roots in 1970s that overlapped the press for universal access. For example,

- The effective schools movement challenged institutionalized patterns of instructional organization and management, famously anchored in arguments and evidence that “we can, whenever and where ever we choose, successfully teach all children whose schooling is of interest to us” (Edmonds, 1979, p. 23).
- State court decisions introduced the legal concept of adequacy (vs. equity) in justifying differential distribution of resources among public school districts to ensure comparable educational quality for all students (*Robinson v. Cabill*, 1973).
- In 1979, federal policy establishing the U.S. Department of Education as a cabinet-level federal agency was premised, most fundamentally, on two congressional findings:

(1) education is fundamental to the development of individual citizens and the progress of the Nation; (2) there is continuing need to ensure equal access for all Americans to educational opportunities of a high quality, and such educational opportunities should not be denied because of race, creed, color, national origin, or sex. (Department of Education Organization Act of 1979; <https://www.gpo.gov/fdsys/pkg/STATUTE-93/pdf/STATUTE-93-Pg668.pdf>)

The press for excellence and equity carried into the 1980s, in no small part due to a rapidly expanding federal role. This included the U.S. Department of Education establishing the National Commission on Educational Excellence, which, in its famous, scathing 1983 report, linked fundamental risks to national security, the economy, democratic processes, and social equality to weaknesses in the educational function of mass public schooling, including academic content, expectations for students' learning, instructional time, and teacher quality, preparation, and work conditions (National Commission on Educational Excellence, 1983). It also included the U.S. Department of Education publishing, in 1984, the first ever national report presenting evidence of state-by-state disparities in educational performance as related to educational resources and population characteristics (Ginsburg, Noell, & Plisko, 1988).

Debates about excellence, equity, and their relation to classroom instruction carried well beyond the federal government into the plural environments of U.S. public education. Responding to concerns with federal overreach, the nation's governors reasserted the state role in public education and introduced the notion that long-established local autonomy over educational specifics should be linked to new accountability for results (National Governors Association, 1986). Responding to concerns about increased government bureaucracy, advocates argued for raising the professional status of teachers as the primary resource for high-quality instruction (Carnegie Forum on Education and the Economy Nation, 1986). Also responding to concerns about government bureaucracy, critics called for shifting from democratic to market control of public education to empower families and to drive innovation (Chubb & Moe, 1988).

Toward moving from public debate to public policy, the historic Charlottesville Education Summit of 1989 ended with leaders from the executive branches of the federal and state governments agreeing to six National Education Goals affirming a commitment to access (via goals for preK education, high school retention, and positive school climates) while also affirming new commitments to excellence and equity (via goals for realizing world-class public education by the year 2000 that positioned *all* U.S. students for academic success and civic participation). The National Education Goals were introduced in the State of the Union Address by President George H. W. Bush in January 1990 and approved by the National Governors Association in February 1990, with the National Education Goals Panel established in July 1990, to monitor progress (Vinovskis, 1999).

Transforming the Enterprise

By historical standards, the 1980s were remarkable. In a national education enterprise characterized both by its limited central governance and its diversity of educational aspirations, the newly created federal Department of Education was instrumental in catalyzing federal/state collaboration in establishing a parsimonious set of shared education goals that, while largely symbolic, aimed to structure the national education reform agenda around the coordinated pursuit of excellence and equity.

But, again, different conceptions of excellence, equity, and their pursuit were (and continue to be) widely contested, not only among national-level policy elites as discussed above but also among advocates and grassroots reformers who conceptualize excellence as anchored in preparation for democratic participation, equity as anchored in principles of social justice, and their pursuit as anchored in the empowerment of families and communities.

Even so, the debates and compromises of the 1980s and early 1990s began to build consensus around operational conceptions that would soon drive federal and state policy. Excellence would center more narrowly on improving outcome measures for all students (and not privileging the success of some while neglecting others). Equity would center on reducing disparities in outcome measures among students, such that, as quality increased, gaps between students would narrow (and not sustain or expand). Realizing these ambitions, finally, would require comprehensive, coordinated initiatives aimed at transforming U.S. public education from an access-oriented mass public schooling enterprise to a collection of instructionally focused education systems.

Efforts to transform U.S. public education began in the 1990s as a sort of “addition without subtraction,” with new ambitions for (and conceptions of) excellence and equity advanced within the institutionalized architecture of mass public schooling (Cohen & Spillane, 1992). Rather than reducing the many interests, organizations, and enterprises operating in U.S. education environments, federal and state agencies took on even more active roles in structuring new resources, incentives, and sanctions aimed at bringing macro-level actors into tighter coordination with each other and into deeper engagement with instruction.

But to say that federal and state agencies took on more active roles is neither to suggest that norms and designs for limited central government had evaporated, nor to suggest that these agencies had evolved to resemble education ministries with authority and capabilities to provide comprehensive, substantive educational support to districts and schools. Quite the opposite. The educational specifics would continue to be worked out by public school districts, motivated and supported (in principle) by increasingly coordinated and instructionally focused education environments.

A framework for moving the U.S. public education enterprise beyond mass public school toward instructionally focused education systems was mapped out in a seminal paper on “systemic reform” by Smith and O’Day (1991). The logic of systemic reform was anchored in reviews of research on effective schools and districts (Purkey & Smith, 1983, 1985); bolstered by new evidence of conditions under which public schools could, in fact, have a powerful equalizing effect on students (Heyns, 1978; Heyns, 1987); and shaped by contemporaneous efforts in states (e.g., Vermont, Kentucky, New York, California, and South Carolina) and professional associations (e.g., the National Council of Teachers of Mathematics) to establish (and to support the use of) coordinated content standards, teaching standards, assessments, and evaluations as resources for instructional improvement.

With that, the logic of systemic reform sought to effect coherent local educational and accountability infrastructures long missing in U.S. public school districts, anchored in a shared vision for teaching and learning that would drive resource selection, professional development, and student assessment. Local work would be motivated and supported by coherent macro-level educational and accountability infrastructures featuring coordinated, state-level academic content standards, performance standards, and accountability assessments that moved beyond basic skills toward cognitively demanding content and tasks; curricula and other educational resources aligned with those standards and assessments; and preservice and in-service professional development aligned with those standards, assessments, and resources.

The logic of systemic reform was quickly taken up in federal policies that aimed to move states, districts, and schools toward these types of coherent, coordinated educational and accountability infrastructures, notably, the Goals 2000–Educate America Act of 1994 and the Improving America’s Schools Act of 1994. Working in tandem, these two federal policies resourced and incentivized (a) the development of state standards and assessments and (b) school-wide improvement responsive to state standards and assessments.

Yet the logic and policies of systemic reform were introduced into a highly politicized reform context without tamping down the many voices and interests that, through the debates of the 1980s, had driven excellence and equity to the center of the national education reform agenda. Moreover, new voices and interests soon emerged that sought to champion, shape, and even challenge that agenda: for example, the Annenberg Institute for School Reform, the Education Trust, and the Civil Rights Project.

Given the plural environments of U.S. public education, the coherence so central to the logic of systemic reform soon gave way to multiple policy logics advanced simultaneously by the federal government, state governments, and philanthropists since the 1990s, each privileging different approaches to improving educational quality and reducing disparities:

- Standards-and-accountability aimed at (a) raising standards and building consensus around ambitions for students’ learning and measures of student outcomes and (b) catalyzing improvement using incentives and sanctions
- Markets-and-choice aimed at empowering families to pursue their educational aspirations and values, creating competition among schools, and stimulating entrepreneurship and innovation
- Research-and-evidence aimed at privileging science over fads, improving quality and accountability in the school improvement industry, and driving the use of data in decision making and practice
- Autonomy-and-professionalism aimed at (a) maintaining local discretion among districts and schools and (b) leveraging the knowledge and capabilities of teachers and leaders as resources for addressing the specific needs of students, schools, and communities

The proliferation of policy logics has driven the expansion of macro-level infrastructures supporting mass public schooling. For example, since the 1990s, governance infrastructures have expanded to include new categories of public school districts (e.g., state takeover districts, turnaround zones, and charter school networks) and new forms of oversight (e.g., mayoral control, operating boards, and authorizing agencies). Financial infrastructures have expanded to include new federal funding to support school-wide improvement, new state-level funding schemes to reduce disparities among districts, policies supporting open enrollment across districts, and formidable philanthropic investment. Administrative infrastructures have expanded to include new public reporting of student achievement, behavior, attendance, attainment, and school and district quality.

While these policy logics are not necessarily in conflict, their proliferation has exacerbated one of the primary problems that the logic of systemic reform sought to address: incoherence and turbulence in macro-level educational and accountability infrastructures. For example, consider the following:

- The introduction of standards articulating visions for students' learning as advanced by states, professional associations, and national consortia across increasing numbers of academic content areas, all constantly evolving and changing
- The introduction of new categories of formal resources (e.g., benchmark assessments and data systems, designs for coordinating between general education and special education, whole school improvement programs and networks), along with the introduction of a national-level infrastructure to evaluate and publicize their impacts on student outcomes
- The launch of new efforts within and beyond colleges and universities to advance the professional preparation and continuing education of teachers as the essential social resource for instruction, crossed by efforts to support alternative paths into teaching and the creation of alternative graduate schools of education
- The introduction of ever-evolving accountability assessments as advanced by states and national consortia, evaluation strategies for teachers and local educational leaders tied to student performance, and ever-evolving criteria for evaluating aggregate and subgroup performance among students within schools and districts

The incoherence and turbulence go further, to include the rise of opposition motivated by concerns with growing federal and state engagement, the increasing role of philanthropy, and the loss of local democratic control in defining and pursuing excellence and equity in public education (Burch, 2009; Holme, Diem, & Welton, 2014; Peurach & Scott, 2012; Reckhow, 2013; Tompkins-Stange, 2016). Of particular concern is the pursuit of narrow, outcome-focused, policy-determined conceptions of excellence and equity at the expense of conceptions valued more highly among local families and communities. For some families and communities,

this opposition is expressed by simply opting out of state assessments. For those seeking to influence their students' day-to-day educational experiences, the challenge has become one of organizing in new ways to exercise collective voice in complex reform contexts where influence is often traded at the level of organizations rather than individuals (Peurach & Yurkofsky, 2018).

Finally, none of this has done anything to subtract from legacy concerns with “real schools” and “schooling rules” that draw attention to the organizational façade of schools over their educational substance. Instead, the incoherence and turbulence have created counterincentives for districts and schools to engage in a sort of “ritualized rationality” in which they use technical ceremonies to signal a positive response to the press of standards, assessments, research, and evidence, though with little connection to day-to-day classroom instruction (Peurach et al., 2018; Yurkofsky, 2017). It has also created new organizational categories that can be used to signal a positive response to excellence and equity though, again, without making deep changes in classroom instruction: for example, pursuing “21st-century skills” and “deeper learning” using “culturally responsive pedagogies” and “restorative practices” supported by “research-based,” “research-validated,” and “standards-aligned” curriculum materials, all under the guidance of “highly qualified teachers” engaged in “data-driven decision making” and “PDSA cycles” in “professional learning communities.”

Transforming the Organization and Management of Instruction

In policy environments pressing for excellence and equity in educational *outcomes*, the challenge for public school districts charged with working out the specifics is to ensure excellence and equity in students' educational *experiences*. As with education environments, the matter for public school districts is, again, one of addition without subtraction. For local school leaders, the political and administrative work of mass public schooling continues, though complicated by increasing incoherence in education environments, crossed by varying conceptions of excellence and equity among local stakeholders, and bound up with personal accountability for educational responsibilities that many had long marginalized. Indeed, education environments do not present uniformly across public school districts as some sort of objective reality, nor do teachers, families, and community constituents regard the priorities and agendas established in those environments in similar ways. Rather, the essential task for local educational leaders is to “craft coherence,” by identifying, understanding, and working among these many influences and interests—possibly competing, possibly complementary, possibly extraneous—in charting promising paths forward (Honig & Hatch, 2004).

In the face of formidable challenges, many public school districts are, indeed, taking up the work of refashioning themselves as instructionally focused education systems in ways responsive to the societal and policy press for excellence and equity (e.g., Duke, 2005; F. M. Hess, 2006; Kirp, 2013; O'Day, Bitter, & Gomez, 2011; Reville & Coggins, 2007). To varying degrees of success, central offices and schools are collaborating with each other (and, in some cases, with external partners) to guide and

support instruction with the aim of improving quality and reducing disparities. Some are advancing coordinated, strategic plans for comprehensive district redesign; others are muddling through in ways that are more incremental and evolutionary; and all are balancing the increased engagement of central offices and schools with endemic uncertainties in classroom life requiring that teachers retain some amount of discretion over their day-to-day work.

Concurrently, researchers are working to conceptualize, theorize, and guide the work of redesigning mass public schooling enterprises as instructionally focused education systems.² Common themes running through this research include an emphasis on five core domains of activity as integral to these systems:

- *Managing environmental relationships* to selectively bridge, buffer, and reconcile among competing influences and resources in local and broader environments that bear on how the district understands and pursues excellence and equity in classroom instruction: for example, family/community aspirations and values, federal and state policies, philanthropists' agendas, and education research and resources (Honig & Hatch, 2004; Spillane, 2009)
- *Building educational infrastructure* that coordinates (a) visions for instructional practice, (b) formal instructional resources, such as instructional models, curricula, and assessments, and (c) social instructional resources, such as understandings, norms, values, and relationships among teachers, leaders, and students (Hopkins, Spillane, Jakopovic, & Heaton, 2013; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Peurach & Neumerski, 2015)
- *Supporting the use of educational infrastructure in practice* by developing teachers' professional knowledge and capabilities through means such as workshops, practice-based coaching and mentoring, and collegial learning (Cohen, 2011; Cohen et al., 2003)
- *Managing performance* both for (a) continuous improvement, as via iterative, evidence-driven design, implementation, and evaluation, and (b) accountability, as via the use of evidence and standards to assess instructional processes and outcomes (Boudett, City, & Murnane, 2005; Bryk, Gomez, Grunow, & LeMahieu, 2015; Datnow & Park, 2014; Mintrop, 2016)
- *Distributing instructional leadership* beyond established administrative roles to new leadership roles and teams responsible for performing, coordinating, and managing all of the preceding (Elmore, 2000; Spillane, 2006)

Efforts by researchers to bundle these domains of activity into coherent frameworks to guide practice and research rest on a common theory. The more attention to (and coordination among) these domains of activity, the farther districts move in the direction of coherent, instructionally focused education systems; the farther districts move in the direction of coherent, instructionally focused education systems, the more able they will be to respond to the press to raise the quality of students' educational experiences and outcomes on average and to reduce disparities among

them (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Cobb, Jackson, Henrick, Smith, & the MIST Team, 2018; Forman, Stosich, & Bocala, 2017; S. M. Johnson, Marietta, Higgins, Mapp, & Grossman, 2014).

Thus, the image that emerges from this shift toward instructionally focused education systems is not one of “enterprises transformed” but one of “enterprises transforming.” Federal, state, and local governments are working in interaction with nongovernmental enterprises to guide and support instruction in ways that they hadn’t historically, in response to societal ambitions for public education that have expanded considerably.

But this shift toward instructionally focused education systems is emerging in and from a “one best system” in which an institutionalized pattern of instructional organization and management was interacting with increased federal engagement to raise questions about quality and inequality in public schooling. Moreover, in the decades immediately prior, when earlier ambitions aimed at improving educational quality ran into and through this same mass public schooling enterprise, it was mass public schooling that took the hand.

That, then, begs new questions: What happens when ambitions for instructionally focused education systems collide with institutionalized mass public schooling? What new patterns (if any) emerge in the organization and management of instruction in public school districts?

CHANGING PATTERNS IN THE ORGANIZATION AND MANAGEMENT OF INSTRUCTION

Thus, new societal ambitions for excellence and equity in public education are accumulating atop continuing ambitions for universal access to public schooling, with these ambitions pressing public school districts to develop as instructionally focused education systems while sustaining themselves as engines of mass public schooling. A question that follows is whether new patterns of organization and management are emerging from this collision between ambitions and institutions.

To probe for patterns of instructional organization and management, we conducted a comprehensive and systematic analysis of the research literature on the redesign of conventional public school districts (urban, suburban, and rural) and alternative public school districts (state takeover districts, turnaround zones, and charter school networks), from 1995 to the present (see the appendix). Rather than one best system (old or new), we identified four primary types of systems:

- Managerial education systems
- Market-driven education systems
- Federated education systems
- Networked education systems

Each of these four system types has a characteristic theory of action. Each associates closely with specific theories of (and approaches to) district redesign that have

gained or maintained currency since the mid-1990s. And each has a characteristic distribution among central offices and schools of the five domains of work essential to instructionally focused education systems: that is, managing environmental relationships, building educational infrastructure, supporting use, managing performance, and distributing instructional leadership.

Our assertion is not that these four types are enacted by public school districts in some pure form. For example, each of these types can be pursued symbolically. Districts can build elaborate educational infrastructures that signal attention to excellence and equity to key constituents, while doing little to support the use of those infrastructures in practice. Each can also be pursued as a sort of hybrid, with whole districts or individual schools collaborating with external partners (e.g., Cohen et al., 2014; Peurach & Neumerski, 2015). And it is possible for a public school district to be a composite of different approaches to instructional organization and management in different contexts (e.g., in different content areas; in general education, special education, and supplemental/compensatory education; in elementary, middle, and high schools; in neighborhood schools and magnet schools; and in low- and high-performing schools).

Rather than asserting these as normative standards, we offer them as ideal types: heuristics for analyzing, empathetically and critically, instructional organization and management in specific public school districts. The value of this typology rests on its usefulness as an interpretive framework for reasoning about instructional organization and management as work distributed among central offices and schools, across multiple instructional contexts, over time.

Managerial Education System

A managerial education system is characterized by a standard educational approach developed by the central office and administered consistently, district-wide. The theory of action is that the consistent, district-wide use of a high-quality educational approach will improve educational opportunities and outcomes on average while also reducing disparities between schools and classrooms. A managerial education system operates in accord with strategies for organizing and managing instruction that feature hierarchical role relationships and procedural work controls (e.g., Rowan, 1990; Trujillo, 2014).

In a managerial education system, the primary responsibility for building educational infrastructure lies in the central office: devising an instructional vision, developing or acquiring formal resources that provide detailed guidance for practice (supported by evidence of effectiveness), and developing norms that encourage “working within the system.” The work of managing environmental relationships focuses on discerning state accountability requirements and resources for meeting them, as well as engaging families and communities to build buy-in around centrally developed infrastructure. The central office supports schools in using this educational infrastructure through professional development and coaching, with performance management focused primarily on holding schools accountable to standards for

classroom practice and for bottom-line results. These activities require central office instructional leadership over instructional design, professional development, and assessment and evaluation.

The breadth of instructional leadership in the central office narrows the scope of instructional leadership in schools, with principals (along with their associates and assistants) functioning as agents of the central office in administering centrally designed educational infrastructure. The primary focus of school administrators is to support the use of centrally developed educational infrastructure in practice, with performance management focused again on faithful use and bottom-line results. Infrastructure-building and environmental management focus on cultivating understanding and buy-in among teachers, families, and community members of central office decisions and designs.

The pattern of activity that characterizes a managerial education system first emerged from our review of accounts and critiques of redesign efforts in urban public school districts at the onset of standards and accountability (e.g., Elmore & Burney, 1999; E. M. Hess, 2006; Ravitch, 2010; Reville & Coggins, 2007). This pattern was also evident in accounts of urban districts transitioning to standardized curricula coupled with high-stakes assessments (e.g., Diamond, 2012; Hallett, 2010; P. E. Johnson & Chrispeels, 2010); in accounts of instructional improvement in large, fragmented, historically bureaucratic school districts (e.g., Daly, Finnigan, Jordan, Moolenaar, & Che, 2014; Farrell, 2015; Hubbard et al., 2006); and in accounts of charter school networks that feature standardized instructional visions absent affordances for school-level adaptation (e.g., Lake, Dusseault, Bowen, Demeritt, & Hill, 2010; Torres, 2014).

Market-Driven Education System

While a managerial education system is characterized by a standard educational approach, a market-driven education system is characterized by the differentiation of educational approaches among schools, with families and communities advocating for (and choosing among) schools that are aligned with their educational values and aspirations. The theory of action is that introducing market competition while reducing central office control will stimulate school-level entrepreneurship and innovation aimed at improving quality and reducing disparities in ways responsive to families, communities, and broader policy pressures. A market-driven education system operates in accord with many principles of portfolio management as a strategy for reforming public school districts (Bulkeley, Henig, & Levin, 2010; Hill, 2006; Lake & Hill, 2009).

Where the central office of a managerial system is the primary locus of redesign activity, the central office of a market-driven system functions more as an arbiter of school-level design activity. Key functions of the central office are to manage relationships with communities (to ensure educational alternatives responsive to diverse aspirations and values) and policy environments (to establish achievement targets for schools). Performance management focuses on holding schools accountable for

meeting enrollment and achievement targets, reconstituting or closing those that do not, and constituting new schools as alternatives. These activities focus central office instructional leadership primarily on monitoring community and policy environments, goal setting, and evaluation.

In contrast to administering centrally designed educational infrastructure (as in a managerial education system), schools in a market-driven education system have primary responsibility for building educational infrastructure. They devise a school-specific instructional vision, create or acquire formal resources that support that vision, and cultivate a social organization that balances innovation and creativity with family/community responsiveness. That, in turn, places a premium on managing environmental relationships (to discern the aspirations and values of families/communities) and supporting the use of infrastructure in practice (to ensure that aspirations and values are represented in instruction). It also places a premium on managing performance both for continuous improvement (to iteratively refine infrastructure and supports for use) and accountability for bottom-line results (as set by choice-making families and the central office). These responsibilities require that schools develop all of the instructional leadership capabilities of the central office of a managerial education system, in addition to the marketing and advertising capabilities required of competitive markets.

The pattern of activity that characterizes a market-driven education system first emerged from our review of accounts of mayoral and state-directed district redesign (Cucchiara, Gold, & Simon, 2011; Glazer & Egan, 2018; Jabbar, 2016; Wong, 2011). Though they blur lines with managerial and federated systems, this pattern was also evident in accounts of redesign in urban districts that coordinated academic accountability with intradistrict choice programs such as pilot schools, magnet schools, and charter schools (Dauter & Fuller, 2016; Knoester, 2011; O'Day et al., 2011).

Federated Education System

A federated education system is characterized by independence among schools in devising their educational approaches within parameters established by the central office, balanced by an ethos of community and cooperation (in contrast to the competition and accountability of market-driven systems). The theory of action is that knowledge, capabilities, and values in schools and communities are essential resources for organizing and managing instruction in ways that improve quality and reduce disparities, with the central office providing supports to enable success and structuring constraints to ensure a level of district-wide coherence. Thus, where managerial and market-driven systems locate primary responsibility for education design activity either in the central office or in schools, a federated system features a more balanced distribution of design activity between central offices and schools. A federated education system operates in accord with principles of site-based/school-based management, distributed/participatory leadership, and commitment-oriented management strategies (David, 1995; Rowan, 1990; Spillane, 2006).

Where a hallmark of a market-driven system is a lean central office, a federated education system shares the more extensive instructional leadership capabilities of a managerial system, though directed at constraining (but not standardizing) educational approaches among schools. Infrastructure building focuses on establishing principles, frameworks, and guidance for school-level decision making (e.g., a district-wide educational mission, a curriculum scope-and-sequence, and core instructional values), though it can also include selecting infrastructure components to be used district-wide (e.g., an instructional model, textbook series, or assessment). That, in turn, has central offices managing environmental relationships to reconcile infrastructure-building efforts with policy expectations, externally available resources, and family/community aspirations and values. Performance management focuses on supporting schools' use of centrally developed resources, holding schools accountable for working within centrally devised constraints, and sharing accountability for their success.

For schools in a federated education system, a common feature is a participatory leadership team that includes teachers, administrators, and, possibly, family and community representatives. With that, the work of managing environmental relationships goes beyond building buy-in and soliciting input (as with managerial and market-driven systems) to the possibility of incorporating family/community representation into school-level redesign activity, including devising school-specific educational infrastructure within bounds established by the central office. Efforts to support use and manage performance focus on (a) working collegially to realize school-specific educational aspirations and values in classroom instruction and (b) working iteratively and collaboratively to refine educational infrastructure and supports for use.

The pattern of activity that characterizes a federated education system first emerged in our review of accounts of the decentralization reforms in the Chicago Public Schools, where local communities were given high levels of autonomy over schools (Bryk et al., 1998; Engel, 2013; G. A. Hess, 1995). This pattern of activity was also evident in accounts of suburban district redesign that blend central office guidance with school-level decision making (Brown, Anfara, & Roney, 2004; Dooley & Assaf, 2009), in accounts of redesign featuring school-level instructional leadership and mentoring (Honig & Rainey, 2014; Lussier & Forgione, 2010; Terosky, 2014; Youngs, 2007), and in accounts of central offices buffering schools from environmental turbulence to support school-level instructional improvement (Honig, 2012).

Networked Education System

Like a managerial system, a networked education system features a common, district-wide educational approach. However, in contrast to the standardization-and-administration that characterizes managerial systems, a networked education system is characterized by the central office and schools collaborating to develop, use, and refine a conventional, district-wide educational approach. The theory of action is that

establishing, maintaining, and continuously refining common ways of working, district-wide, create potential both to elevate the quality of routine educational work consistently across schools and to address particular educational needs and problems among schools, classrooms, and students (thereby reducing disparities). A networked education system operates in accord with principles of evolutionary learning systems, networked improvement communities, and design-based improvement (Bryk et al., 2015; Fishman, Penuel, Allen, Cheng, & Sabelli, 2013; Peurach, Glazer, & Lenhoff, 2016).

As in a managerial system, the central office in a networked system has primary responsibility for building and maintaining district-wide educational infrastructure. However, efforts to support the use of centrally developed infrastructure balance faithful implementation (to establish conventional, high-quality classroom instruction, district-wide) and school-level discretion (to address school-specific needs and problems). In contrast to the accountability focus of managerial systems, performance management focuses on continuous improvement, with the central office leveraging school-level adaptations as a resource for refining educational infrastructure and supports for use. Managing environmental relationships focuses chiefly on identifying research and research-based resources to inform redesign activity, with outreach to families and communities focused on building buy-in around the district-wide educational approach. These responsibilities require many of the instructional leadership capabilities of managerial and federated education systems, complemented by capabilities to manage distributed, collaborative learning and improvement.

With the central office responsible for building and maintaining educational infrastructure, schools focus most centrally on supporting the use of infrastructure and managing performance in ways that parallel the work of the central office. Efforts to support use balance conventions (to maintain district-wide coherence and quality) with discretion (to address school-specific needs and problems). Performance management focuses on the use of iterative, continuous improvement cycles to structure collegial problem solving and adaptation, with positive adaptations fed back to the central office for potential use, district-wide. In schools, the work of managing environmental relationships involves building buy-in around the district-wide educational approach and engaging families and communities in adapting that approach to the local context. With that, school-level instructional leadership focuses on practice-based professional learning and problem solving, family/community outreach, and evidence-based continuous improvement.

The pattern of activity that characterizes a networked education system first emerged from our review of district and school redesign featuring different forms of research-practice partnerships that draw on the principles of design and continuous improvement (Cobb et al., 2018; Penuel & Gallagher, 2017; Peurach, 2011). This pattern was also evident in accounts of charter school networks, urban districts, and suburban districts that coordinate detailed, district-wide instructional visions with opportunities and support for school-level adaptation and feedback (e.g., Hopkins et al., 2013; Lake et al., 2010; Stein & D'Amico, 2002; Woodworth, David, Guha, Wang, & Lopez-Torkos, 2008).

AMBITIONS AND INSTITUTIONS

With our review of the literature in hand, we return to the questions that motivated it: What happens when ambitions for instructionally focused education systems collide with institutionalized mass public schooling? What new patterns (if any) emerge in the organization and management of instruction in public school districts?

Our answer to the second question is as reported immediately above. The shift from access to excellence and equity in public education—and the consequent shift beyond mass public schooling to instructionally focused education systems—has given rise to at least four types of systems, each with a characteristic theory of action, a close association with a current theories of/approaches to district redesign, and a characteristic distribution of essential work among central offices and schools.

Our answer to the first question is as reported above, also, and elaborated below. When ambitions collide with institutions, we don't see enterprises transformed. Rather, we see enterprises transforming, with new solutions emerging and taking form, though fashioned from (and coexisting with) the very problems that they seek to solve.

Reprise

New ideas, organizations, and practices are always filtered through and/or patched onto inherited ideas, organizations, and practices. This is the case in our analysis of education environments, which appear to be transforming to advance the instructional focus of macro-level educational and accountability infrastructures, though without reducing incoherence and without reducing the appeal of educational form over educational function. This is the case in our analysis of the work of local educational leaders, whose roles appear to be transforming to take up new categories of educational work alongside more (and more complex) political and administrative work that risks drawing their attention away.

This is also the case in our analysis of the types of systems emerging from those efforts. For example, each type is a response to an institutionalized pattern of instructional organization and management characterized by hierarchical organizational arrangements, sorting-resourcing-and-delegating, and learning challenges that followed. Yet this very architecture is central to three of the four system types: managerial, market-driven, and federated systems. That, in turn, leaves these three system types vulnerable to some of the very problems that each seeks to solve. Consider the following:

- All three of these system types (i.e., managerial, market-driven, and federated systems) have the central office in a position of power and authority over schools in establishing the fundamental strategy or approach for system redesign—in a public education enterprise famously distrustful of centralized power and authority, even within public school districts.

- All three depend on essential resources that, in the past, have either not been used effectively or evoked new problems: for example, the detailed instructional guidance of managerial systems (long interpreted by teachers as an unwelcome bureaucratic intervention into their professional work), the license for creativity in market-driven systems (long used by teachers to refashion new resources in ways that support existing practice), and the professional community of federated systems (among teachers who have long valued privacy and autonomy).
- All three seek to manage performance either in central offices or schools for continuous learning and improvement, yet with inheritances of hierarchy complicating the exchange, accumulation, and use of practical knowledge: for example, the lack of reciprocal and lateral relationships between central offices and schools and, in market-driven and federated systems, the beliefs in school-by-school differentiation that complicate collaborative learning.

Networked systems, the fourth system type, seek to manage these very problems: for example, by structuring reciprocal and lateral relations among the central office and schools and by using detailed routines to establish a formal and social foundation for professional practice, problem solving, and learning. However, networked education systems often exist as novel organizational arrangements within districts that manage other work hierarchically and bureaucratically. That introduces risks that detailed routines—the fundamental resource used to establish conventional practice, build social infrastructure, and capture and move knowledge—will be interpreted and used as bureaucratic implements to strong-arm teachers.

And then there is the risk that any one of these four types can be enacted symbolically: for example, a public school district that manages environmental relationships, builds educational infrastructure, and distributes instructional leadership to signal responsiveness to the press for excellence and equity, while doing little to support use or to manage performance. This is the legacy of loose coupling alive in the moment. From that follows the risk that students will still be sorted into schools and classrooms that have different expectations for (and beliefs in) possibilities for their academic success, that those schools and classrooms will be provided incoherent and uncoordinated resources, and that teachers will be delegated primary responsibility for organizing and managing instruction for the students assigned to them using the resources afforded them.

Introspection

Thus, while many public school districts are working earnestly to move beyond mass public schooling to instructionally focused education systems, these efforts are playing out where ambitions and institutions collide. Progress of this sort is measured, with new solutions coexisting with legacy problems. Progress of this sort is slow: nearly 30 years and counting, in the case of the shift from mass schooling to education systems. Progress of this sort must be evaluated against the 300+ years required to establish universal access to public education.

But progress of this sort is possible only with sustained public, political, and policy support over long periods of time. Indeed, even if such support creates and exacerbates incoherence in education environments, the fact that it is *sustained* appears to open up possibilities for new societal ambitions to manifest in the work of public school districts. That is the most important lesson that we have learned in writing this chapter.

When two of us wrote our earlier chapter for the *Review of Research in Education* at the outset of systemic reform, we recognized that initial policy moment as one of truly remarkable change and challenge in its ambitions for classroom instruction. We also worried that neither government agencies nor others in the public sphere had much capability to deliver on those ambitions. And that, we noted, is why most education reforms to that point were short-lived. But we were writing *at* a policy moment, not *across* a historical moment. We did not take seriously the possibility that systemic reform would not only persist but would also sink deep roots over nearly three decades, twisted-and-tangled in the institutions of mass public schooling.

Anticipation

With this chapter, we attended much more to how public school districts have responded to reforms that have far outlived our earlier expectations. We see reasons for hope, not only in the type of system redesign activity on which we report here but also in (a) continued research suggesting possibilities of a powerful equalizing effect of schooling on students (e.g., Downey, von Hippel, & Broh, 2004) and (b) new research suggesting possibilities to improve achievement on average and to reduce disparities among diverse students at a very large scale (Cohen et al., 2014; Reardon & Hinze-Pifer, 2017; Rowan, Correnti, Miller, & Camburn, 2009).

As we anticipate the coming decades, a central matter becomes that of sustaining the ambitions of these reforms as they collide with the institutions of mass public schooling. Nobody knows how this matter will play out. Much is likely to depend on the continued state embrace of the Common Core State Standards, on the engagement of philanthropists and nongovernment agencies, and on the engagement of teachers and families. The same holds for the Next Generation Science Standards. But this state-level activity will be playing out in interaction with unprecedented political turbulence at the federal and national levels. To say that this turbulence is a wild card is to risk serious understatement.

Whatever the ebbs and flows of politics and policies, as long as societal ambitions to improve educational quality and reduce inequality persist, our conjecture is that public school districts will be pressed to move beyond functioning as engines of mass public schooling to functioning as instructionally focused education systems, with local education leaders, teachers, families, and communities collaborating to work out the specifics.

As they do, further research is needed that examines and explains variation among the full range of public school districts in the following:

- Their movement toward instructionally focused education systems
- The role of policy and philanthropy in motivating and supporting this movement
- Patterns of instructional organization and management that emerge within and among them (perhaps consistent with the system types described here; perhaps consistent with other system types not yet evident in the literature)
- Performance levels of particular types of education systems in particular school, district, and state contexts

Yet, as we reflect on the mountains of research that we reviewed in writing this chapter, three emerging, interdependent genres strike us as especially promising for actually supporting districts in this work. Each aims to help districts in working and learning in new ways. Each would gain power if conducted longitudinally (to experience and examine system redesign over time) and comparatively (to experience and examine differences among content areas, levels of schooling, states, and even nations). They are the following:

- Research that aims to produce practical theory and guidance for organizing and managing instructionally focused education systems (e.g., Bryk et al., 2010; Forman et al., 2017; S. M. Johnson et al., 2014)
- Research that engages educational professionals, community constituents, and university researchers in collaborative design, problem solving, and improvement (e.g., Bryk et al., 2015; Cobb et al., 2018; Penuel & Gallagher, 2017)
- Research that positions external evaluators in reciprocal, developmental learning relationships with local education leaders (e.g., Peurach et al., 2016)

But these emerging genres of research are ambitions all their own, in collision with deeply institutionalized traditions of research and innovation that understand and pursue knowledge, its development, and its use in very different ways (Peurach, 2016; Peurach et al., 2018). Their continued development and widespread use will also require sustained public, political, and policy support.

Coda

As we imagine the potential power of these new genres of research, we remind ourselves of the intergenerational movement that they seek to support and sustain: the long historical arc of U.S. public education in and from which ambitions for excellence and equity have emerged and with which they collide.

Absent sustained public, political, and policy support, the collision between ambitions and institutions is not much of a collision at all. Institutions take the hand every time. With sustained public, political, and policy support, the collision becomes a version of societal plate tectonics: a slow grinding between new and inherited traditions of thought and action, each a powerful force. Seismic events do occur: A champion finds voice, judges see light, and policymakers find common cause. But, most

often, the earth changes slowly but profoundly, while the ground on which we stand looks surprisingly familiar—until it's not.

So has it been with the shift in societal ambitions beyond access to excellence and equity in public education. So is it likely to be with the shift beyond access-oriented mass public schooling to instructionally education systems.

APPENDIX

Searching and Analyzing the Literature

To probe for new patterns of instructional organization and management, we conducted a comprehensive and systematic analysis of the research literature. Below, we detail our methods for sampling categories of districts, searching the literature, and analyzing our sources. We also reflect on limitations in our approach.

Sampling Categories of Districts

For this analysis, we sampled conventional public school districts (urban, suburban, and rural) and alternative public school districts (state takeover districts, turnaround zones, and charter school networks), because they are the mass public schooling enterprises in the United States that are in most direct contact with the political and policy activity pressing for instructionally focused education systems. Our conjecture was that there would be sufficient variation among these categories of public school districts to probe for different patterns of instructional organization and management.

We did not sample large-scale religious education enterprises (e.g., Catholic, Jewish, or Lutheran) or large-scale, philosophically aligned enterprises (e.g., Montessori or Rudolf Steiner), because they are in less direct contact with the political and policy activity pressing for instructionally focused education systems. Furthermore, we did not sample “hybrid” enterprises in which nonprofit or for-profit organizations support central offices and/or schools in district redesign. While hybrid enterprises do engage the same political and policy presses as public school districts, our prior research suggests that political and administrative matters (e.g., lack of formal authority and the lack of institutionalized funding structures) have them doing so differently from public school districts (Cohen et al., 2014). We reserve comparisons with and among public, religious, philosophically aligned, and hybrid education enterprises for future analyses.

Searching the Literature

Our primary approach to identifying sources was to use ProQuest to search the ERIC database for peer reviewed articles since 1995 using a standard set of keywords (e.g., “system,” “organization,” “district,” “network,” “local education agency,” “instruction,” and “teaching”). We focused primarily on peer-reviewed research in academic journals as a quality criterion, given the proliferation of books, foundation reports, and think tank reports on district redesign (a good deal of which are of questionable quality and independence). We focused on articles published since 1995, because this is the year after which the logic of system reform was first

operationalized in federal policy and at which time empirical research focusing on it was first published. To supplement our primary search, we also included selected reports and books: for example, federally funded reports on charter school networks and rural school districts and books from peer-reviewed university presses.

This approach yielded over 1,700 articles, reports, and books. We then reviewed titles and abstracts to identify research that took entire districts and schools (rather than targeted components of districts and schools) as the primary units of analysis. To establish reliability, we randomly sampled sources, independently coded them to determine if they met these criteria, and then discussed and resolved disagreements. The process yielded 205 sources that became the focus of our search for patterns of instructional organization and management.

Analyzing Our Sources

We coded the 205 resulting resources using the five core work domains detailed in our main analysis. Because nearly 40% of our sources focused on urban districts, we began there, by writing and comparing analytic memos identifying patterns of work activity and its distribution among central offices and schools. Our analysis of urban districts yielded six system types: early iterations of what we ultimately came to describe as managerial, market-driven, federated, and networked systems; “hybrid” systems as described in our sampling procedures; and “symbolic” systems featuring structural changes absent connections to classroom practice. We then refined our provisional typology by repeating these analytic procedures for the other five categories of public school districts, reconciling them with our provisional typology, and refining the typology as we moved forward.

As our analysis converged on these six system types, we then reconciled them with theoretical, conceptual, and practical research on district redesign (a) to develop an interpretation of the theory of action and assumptions underlying each and (b) to draw principles and language to use in representing them. For purpose of this analysis, we do not report our findings on hybrid systems, because we did not systematically search for research on hybrid systems and for the reasons discussed above, under sampling. Furthermore, we do not identify a symbolic system as a type of instructionally focused education system, because it does not meet our definition.

Limitations

One matter that tempers our analysis is the general paucity of peer-reviewed research on the redesign of public school districts as instructionally focused education systems. Most of the literature on district redesign examines either (a) political and administrative matters or (b) targeted educational interventions. Moreover, of the research that did examine comprehensive district redesign, much took the form of evaluations that “blackboxed” exactly the organizational dynamics of interest to us. Indeed, in searching the literature, we were struck by its isomorphism both with legacy conceptions of educational innovation and improvement (e.g., research focused on targeted interventions) and with current policy priorities (e.g., research focused on

identifying “what works”). Genres of research focused on understanding *how* complex, systemic, large-scale instructional improvement work actually plays out (and opportunities to publish such research) appeared to be comparatively thin, despite the ubiquitousness of such work in public school districts. For those who see value in the type of future research that we suggest in this analysis, these matters are cause for concern.

Second, even though our methods were comprehensive and systematic, they were neither exhaustive nor scientific. Though surprised by the general paucity of peer-reviewed research, we were also struck by the abundance of nonacademic publications providing insights into redesign activity in public school districts. If approached with care, our strong hunch is that there is much to be learned from these sources. Furthermore, our analytic approach, even while grounded in our research-based “five core domains” framework, was inductive and interpretive. That is why we offer the resulting typology as a collection of ideal types, the value of which lies in their usefulness (and not as normative standards to be found in the world in pure form). In the near future, we will be advancing additional research that (among other things) uses these system types to construct vignettes of actual public school districts, such that the ideal types described here are complemented by illustrative cases.

Indeed, a primary criticism of our analysis would be that there is much more to be examined, and that other analytic approaches would reveal a more elaborate typology of education systems than represented here. We welcome this line of criticism, because it makes one of our fundamental points. This is not a moment in which some new, “one best system” appears to be emerging. Rather, it appears to be a moment of divergence, exploration, and variety, bounded by institutionalized patterns of organization and management, emerging logics and new understandings, and local affordances and inventiveness.

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NOTES

¹ This analysis is one product of the Spencer Systems Study at Northwestern University and the University of Michigan. The analysis draws from (and extends) earlier analyses examining dilemmas endemic to the redesign of education systems (Cohen et al., 2018), possibilities for engaging families and communities in the redesign of public school districts (Peurach & Yurkofsky, 2018), system-environment interactions in developing and leveraging educational infrastructure for instructional improvement (Spillane, Seelig, Cohen, Peurach, & Blaushild, 2018), and the engagement of nongovernmental organizations in the redesign of public school districts, in the United States and cross-nationally (Peurach et al., in press). Components of the

analysis were first presented in the *Cooper Annual Leadership for Learning Lecture* at the University of Virginia (Peurach, 2018) and at the April 2018 meeting of the American Educational Research Association (Peurach, Yurkofsky, Spillane, & Cohen, 2018). Future publications from Spencer Systems Study will go further by (among other things) providing detailed vignettes and examples of the four types of education systems identified in this analysis.

² The “five domains” framework presented here (along with “four systems” typology developed below) were previously presented in a digest of this chapter published as a policy brief by the National Education Policy Center (Peurach & Yurkofsky, 2018). The policy brief situates this same framework and typology in a specific “use context” (i.e., family and community engagement in district redesign), as a resource for states, advocates, and reformers in supporting deeper family and community engagement in efforts to improve students’ day-to-day lives in classrooms.

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