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Developing, Implementing, and Institutionalizing Complex Educational Innovations: Considerations for Balanced Assessment Systems

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CONTENTS

INTRODUCTION

Beginning in the 1980s, increasing recognition of the complex, interdependent problems underlying persistently low quality and inequitable educational outcomes in the United States has given rise to increasingly complex innovations that aim to address multiple problems simultaneously, in interaction (Peurach, 2011). Examples of such innovations include "whole school"/school-wide reforms, comprehensive school reform programs, school turnaround models, charter school networks, and networked improvement communities.

Developing, implementing, and institutionalizing complex innovations is no simple matter. Doing so involves coordinated efforts among interdependent actors distributed among multiple organizations, each with their own agendas and constituencies; in variable authority and influence relationships; with different stocks and flows of resources; in diffuse, dynamic educational environments; and over long periods of time. Yet any such efforts rest atop a fundamental problem: The very complexity of many of these innovations often makes them difficult to perceive and to understand, never mind to develop, implement, and institutionalize.

Balanced assessment systems are a case in point. If nothing else, this volume is a representation of balanced assessment systems as a complex innovation that aims to address multiple problems simultaneously, in interaction. For example, Chapter 7 in this volume, "State Practices and Balanced Assessment Systems," theorizes and seeks to guide interdependent state-level activities needed to establish conditions that would support productive engagement with balanced assessment systems in districts and schools. Chapter 6 in this volume, "District and School Practices and Assessments to Support a Learning-Centered Vision," theorizes and seeks to guide districts and schools in supporting productive engagement in classrooms. Chapter 3 in this volume, "Human Learning and Development: Theoretical Perspectives to Inform Assessment Systems," elaborates a novel, ambitious, and evolving theory of human learning and development that states, districts, schools, and classrooms should heed in supporting the development of students.

Yet, as argued in Chapter 2 of this volume, "The Struggle to Implement Balanced Assessment Systems: Explanations and Opportunities," the more than 20-year history of balanced assessment systems to date is largely one of low-level, problematic, and non-engagement, owing, in part, to the complexity of the underlying ideas. As a first recommendation for moving forward in Chapter 2 of this volume, Polikoff and Hutt argue that "achieving balance must be made both more understandable and feasible for educators and local and state policy makers. The criteria underlying balanced assessment systems are laudable, but the ideas are too complex for widespread comprehension and implementation in the current highly decentralized, capacity-poor education systems" (p. 43).

Indeed, as argued in Chapter 1 of this volume, "Reimagining Balanced Assessment Systems: An Introduction," the idea of balanced assessment systems has been distorted (and sometimes corrupted) as it has been taken up not only by state and local actors within the formal educational governance structure but also by market actors. This volume as a whole is premised on the concern that this distortion and corruption is

sufficient to warrant a new and clearer articulation of the idea (see Chapter 1 of this volume).

The purposes of this chapter, thus, are (a) to establish a general framework for understanding complex educational innovations and (b) to model the use of this framework for understanding the fundamental ideas underlying balanced assessment systems. Given the practical ambitions of this volume, one instrumental aim is to guide the integration of balanced assessment systems into ongoing reform efforts at the state and local levels that aspire to advance educational quality and equity.

This chapter is structured in four sections. The first establishes context, introduces our analytic framework, and sets out our plans for further developing it. The second and third sections develop (and model the use of) the framework at the state and local levels. The fourth section discusses considerations for the learning and engagement of state and local leaders.

We conclude with what we see as the key takeaway from this chapter and from the volume: The adult and organizational learning demands of balanced assessment systems are every bit as novel and ambitious as the goals for student learning, and those learning demands require commensurate attention in developing, implementing, and institutionalizing balanced assessment systems.

CONTEXT AND FRAMING

Our premise is that, while complex, neither the ideas underlying balanced assessment systems nor the broader environments in which they operate are unknowable. The matter at hand is developing a schema and approach for learning about them.

The Idea and Challenges of Balanced Assessment Systems

Again, we take the fundamental task for state and district leaders to be building shared meaning and understanding of the idea of balanced assessment systems as a prerequisite to supporting their development, implementation, and institutionalization. If that is their fundamental task, it promises to be a challenging one, beginning with the complexity of the idea itself. Indeed, the idea of balanced assessment systems (as it was first introduced, as it has evolved, and as represented across this volume) can be understood as having three core dimensions: *mechanisms, practical ambitions,* and a *theory of action*.

- The *mechanisms* of balanced assessments systems are resources: integrated assessments designed to serve different purposes among different actors at the classroom, school, district, and state levels, all anchored in theories of student learning that center the development of the whole child (cognitive, social, and emotional) and the communities in which children live.
- The *practical ambitions* of balanced assessment systems are to coordinate the work of organizing, managing, and improving instruction from the classroom level to the state level, as enacted by teachers, local leaders, and state leaders, to advance quality and equity in students' educational opportunities, experiences, and outcomes. Central to this work is advancing ambitious teaching commensurate

with theories of student learning that center the development of the whole child in community.

- The *theory of action* is that assessment at all levels will provide teachers, local leaders, and state leaders with the evidence that they need both to (a) work within existing systems to make incremental adaptations to students' learning opportunities and experiences and (b) bring diverse perspectives to bear on interrogating, disrupting, and reforming existing systems to support cognitively rigorous, socially and culturally relevant, and personalized learning for all students.

Another challenge lies in the complex U.S. public education enterprise into which state and local leaders are to introduce the idea of balanced assessment systems. This enterprise includes federal and state governments, with educational responsibilities distributed among levels, branches, and agencies. It includes a national-level market that has long served as a primary source of material, human, and knowledge resources. It includes professional associations, interest groups, advocacy organizations, philanthropies, think tanks, and research institutes that seek to inform and influence political, policy, and social agendas. And it includes public school districts with educational responsibility distributed among central offices, schools, and classrooms, themselves remarkably variable in form and governance.

Yet another challenge is that the U.S. public education enterprise has been in the throes of active reform since the mid-20th century in pursuit of the very goals of balanced assessment systems, with no signs of stopping. Indeed, the idea of balanced assessment systems is one among many policy-level initiatives, past and present, pressing local districts and schools to organize, manage, and improve instruction in ways that advance educational quality and equity. Some of these policy-level initiatives have had shared aspirations for aligned coherent systems. Many others have not. Rather, the conventional narrative is that policy-level fragmentation, incoherence, and turbulence have fueled faddism in educational innovation and improvement, with pendulums swinging back and forth between competing ambitions and with waves of reform washing in and out. With that, policy-level fragmentation, incoherence, and turbulence are recreated within districts and schools.[1]

Reconsidering Development, Implementation, and Institutionalization

For state and local leaders advancing balanced assessment systems, the matter is not to steward the type of sequential "development, implementation, and institutionalization" process commonly associated with large scale innovations. Moreover, it is

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[1] Regarding what we describe here and throughout this chapter as the "conventional narrative" about the relationship between policy-level and local-level reform activity: See Smith and O'Day (1990) and Fuhrman (1993) for early and seminal theory and analysis of coherent education policy, including the problems to be addressed through policy coherence. See Bryk et al. (1999), Cohen and Spillane (1992), Hess (1998), Payne (2008), and Powell et al. (1985) for analyses of fragmentation, incoherence, turbulence, and their consequences.

unlikely that balanced assessments systems will cut through the complexity of U.S. public education en route from design to use, nor that they will catalyze coherence throughout. Rather, the risk is that balanced assessment systems will become entangled in the complexity of U.S. public education and fuel further fragmentation, incoherence, and turbulence.

Again, the first-order matter is to build shared meaning and understanding of *the very idea* of balanced assessment systems, so that multiple organizations, interests, and actors across this vast educational landscape with different histories, allegiances, and capabilities recognize and value the place and role of balanced assessment systems in advancing educational quality and equity. From a practical perspective, building shared meaning and understanding will benefit from state and local leaders collaborating on three tasks:

- *Seeing systems*: Analyzing the complex policy and local contexts into which they will be introducing the idea of balanced assessment systems to discern different frames that will shape how educators make sense of the idea.
- *Crafting coherence*: Developing shared understandings of the place and role of balanced assessment systems among other ongoing policy-level and local-level initiatives aiming to advance educational quality and equity.
- *Learning while leading*: Developing opportunities for their own collegial learning, both to share and leverage successes and to work through the inevitable false starts, variable uptake, and difficult-to-discern progress endemic to building shared meaning and understanding of such a complex idea in such a complex context.[2]

Our Analytic Framework and Approach

We continue, then, by developing a general analytic framework for considering the development, implementation, and institutionalization of complex, systemic innovations in interdependent macro-level and local-level education contexts. As we do, we consider the different potential uses of this framework by state and district leaders in building shared meaning and understanding of balanced assessment systems. To develop our analytic framework, we synthesized three interdependent lines of our scholarship and research:

- scholarship on the co-evolution of policy and local contexts in organizing, managing, and improving instruction;
- empirical research on building and rebuilding systems to organize, manage, and improve instruction; and

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[2] Our notion of "seeing systems" draws from Bryk et al. (2015). Our notion of "crafting coherence" draws from Honig and Hatch (2004) and Russell and Bray (2013).

- improvement research aimed at developing and leveraging capabilities for collaborative, continuous learning and improvement in states, networks, districts, and schools.[3]

Across these three lines of research and scholarship, we have identified order and structure in macro-level policy contexts, local-level systems, and their relationships that may not be immediately apparent at particular moments in time. We have also identified how this order and structure has accumulated historically and how it continues to accumulate. We have then used these insights to construct a counter-narrative to the conventional characterization of policy-level and local-level fragmentation, incoherence, and turbulence in the U.S. public education enterprise.

As summarized in Table 8-1, our analytic framework includes three primary components. The first component is leading policy logics that have been accumulating at the state and national policy level since the mid-1900s: what we call *resource-forward*, *practice-forward*, and *empowerment-forward* innovation and improvement. The second component associates each policy logic with a particular category of organizational legitimacy pressing on local-level efforts to organize, manage, and improve instruction: what we call *structural/procedural*, *technical*, and *moral* legitimacy.[4] The third component charts the co-evolution of local districts in interaction with these policy logics and associated legitimacies: what we describe as a progression from *school* systems to *education* systems to *learning* systems.

The three components of Table 8-1 summarize our historical analysis of the accumulation and co-evolution of (a) national-level policy logics, (b) policy presses on local districts, and (c) capabilities in local districts. It addresses the period following World War II (and the onset of increased federal engagement in public education) to the present. The table can be used as a framework for analyzing the development of logics, presses, and capabilities in individual states and districts and, with that, the schema that shape how states and districts perceive and understand the multi-dimensional idea of balanced assessment systems.

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[3] These three lines of scholarship and research include systematic reviews and analytic essays that index and integrate multiple literatures on education innovation, policy, reform, and improvement at the policy and local levels, both historical and contemporary. As such, the general framework that we develop here is a "synthesis of syntheses" that is more comprehensive than any of our prior work. In developing this general framework, page limits preclude fully reconstructing our prior reviews and analyses in the context of this chapter. Instead, we include liberal references and notes throughout, trusting that readers who are curious or critical will review our earlier work to suit their needs and interests. By way of overview, for scholarship on the co-evolution of policy and local contexts in organizing, managing, and improving instruction, see Cohen et al. (2018); Peurach et al. (2019b, 2022a); and Spillane et al. (2019a). For empirical research on building and rebuilding systems, see Datnow et al. (2022); Peurach et al. (2019a, 2019c); Russell and Bray (2013); and Spillane et al. (2019b, 2022). For improvement research aimed at developing capabilities for collaborative, continuous learning and improvement, see Peurach et al. (2018, 2022b) and Russell et al. (2015, 2017, 2019, 2020).

[4] Our conceptions of legitimacy are adapted from Spillane et al. (2022) and Suchman (1995).

TABLE 8-1 Analytic Framework: The Co-Evolution of Policy Logics and Local Districts (post–World War II to present)

Policy Logics	Policy Press on Local Districts	Local Capabilities	Balanced Assessment Systems
Resource-Forward Innovation and Improvement: • Advance quality and equity via the production of more and better educational resources distributed more equitably among local districts	*Structural/Procedural Legitimacy:* • Maintaining good standing by (a) publicly signaling commitments to advancing educational quality and equity and (b) complying with organizational and administrative requirements	*School Systems:* • Provide access to instruction by sorting students into schools, grade levels, and classrooms; resourcing them with materials; and delegating responsibility to teachers	*Mechanisms:* • Integrated assessments designed to serve different purposes among different actors at the classroom, local, district, and state levels to support the development of the whole child in community
Practice-Forward Innovation and Improvement: • Advance quality and equity by improving instruction and the school and district contexts in which it is situated	*Technical Legitimacy:* • Maintaining good standing and signaling appropriate engagement by generating evidence of improving quality and reducing disparities in student outcomes	*Education Systems:* • Districts, schools, and teachers collaborate to organize, manage, and improve instruction to improve quality and reduce disparities	*Practical Ambitions:* • Coordinate the organization, management, and improvement of instruction from the state level to the classroom level to advance ambitious teaching
Empowerment-Forward Innovation and Improvement: • Advance quality and equity by developing and mobilizing local agency and capability, broadly and inclusively, to identify and address local educational ambitions, needs, and problems	*Moral Legitimacy:* • Maintaining good standing and signaling appropriate engagement by supporting inclusion and participation among people, groups, and communities whose perspectives and priorities have historically been marginalized	*Learning Systems:* • Engage diverse stakeholders (professional, family, and community) in developing understandings, knowledge, and values needed to identify and address local educational ambitions, needs, and problems	*Theory of Action:* • Comprehensive, coherent, and continuous assessment will bring diverse perspectives to bear on working within systems and interrogating, disrupting, and reforming systems to advance quality and equity

We discuss Table 8-1 in detail throughout this chapter. The table supports three lines of analysis:

- As *a synthesis of research*, the first three columns of Table 8-1 can be read from top to bottom as an historical taxonomy of policy logics, presses, and capabilities that are accumulating as actors at the policy and local levels gain increasing understandings of what more is needed to define and advance ambitions for educational quality and equity.
- In practice, these logics, presses, and capabilities will be variably developed in individual states and local districts (e.g., institutionalized, developing, or emerging). With that in mind, the first three columns of Table 8-1 can be read as *a developmental sequence* that can be used to analyze progress in individual states and local districts.
- The levels at which understandings and capabilities are developed, in turn, can be considered as *schema* that enable and constrain ways that state and local actors perceive and understand new ideas.

We also include a fourth component in Table 8-1 framing how state and local actors are apt to perceive and understand the multi-dimensional idea of balanced assessment systems, depending on their level of development. The more developed the policy logics in a state (or the local capabilities in a district), the greater the potential to fully perceive and understand the idea of balanced assessment systems; the less developed, the greater the risk that perception and understanding will be capped at the current level of development. For example, a state that has evolved in ways that also embrace a practice-forward logic (or a local district that has evolved as an education system) is more likely to perceive and to understand the practical ambitions of balanced assessment systems and to be positioned to understand more fully the theory of action. By contrast, a state that operates largely within a resource-forward logic (or a local district that has developed only as a school system) is less likely to perceive and to understand the practical ambitions and theory of action of balanced assessment systems.

By helping them to see order and structure in policy-level and local-level contexts, our analytic framework is a potential resource for state and local leaders in developing shared understandings of the place and role of balanced assessment systems among other policy-level and local-level initiatives, past and present, aiming to advance educational quality and equity. It also is a potential resource for state and local leaders in learning while leading, as they engage colleagues, constituents, stakeholders, and (importantly) each other in building shared meaning and understandings of balanced assessment systems.

SEEING AND CRAFTING AT THE POLICY LEVEL

The aim of seeing systems and crafting coherence at the state level is to develop shared understandings of the place and role of balanced assessment systems among other ongoing, policy-level initiatives seeking to advance educational quality and equity. Doing so requires gaining perspective on the national education policy context in which states operate. Indeed, as a policy initiative, the idea of balanced assess-

ment systems did not emerge and gain currency within individual states operating in isolation. Rather, it emerged and gained currency through the collaborative efforts of coalitions of non-public and public actors operating at the national level, across states.

As described above, this national policy context is less of a formal *system*: a collection of organizations designed and structured to work in interaction, with shared purpose and toward a common goal. Rather, it is more of a complex *national education ecology*: a sprawling organizational field in which diverse organizations with their own ambitions, interests, and agendas for public education interact across states with varying degrees of mutual awareness, cooperation, and competition; with varying means of influencing local education contexts; and with the federal government as but one player.[5]

Again, the conventional narrative is that this national education ecology is rife with fragmentation, incoherence, and turbulence. This conventional narrative, in turn, is likely to be the cognitive frame through which many perceive and understand balanced assessment systems: that is, as another set of initiatives among many being advanced within and beyond governments; as amplifying demands and disorder; and, thus, as much problem as solution.

Yet, as represented in Table 8-1, we have identified policy logics that have been accumulating at the national level since the mid-1900s, one atop the other, and that bring order and structure to the national education ecology: the logics of *resource-forward*, *practice-forward*, and *empowerment-forward* innovation and improvement. These logics, in turn, create a press on local districts to maintain their *structural/procedural*, *technical*, and *moral* legitimacy.

These policy logics are lines of reasoning that associate policy actions and activities with policy goals and objectives: for example, if we enact policy X (e.g., universal access to preschool), then we will accomplish goal Y (e.g., more equitable student outcomes in K–12 schools). These policy logics structure discourse and debate about policy issues. With increasing consensus, they begin to function as shared assumptions—sometimes explicit, sometimes tacit—about relationships between policy and outcomes, and they incentivize and legitimize local approaches to innovation and improvement.

Our central line of argument is that, by seeing and understanding the national policy context as an ecology structured by these policy logics, state and local leaders will be better positioned to construct a counter-narrative that positions balanced assessment systems squarely within leading lines of reasoning and action aimed at advancing educational quality and equity.

Resource-Forward Innovation and Improvement

The theory of action underlying *resource-forward innovation and improvement* is that students' educational opportunities, experiences, and outcomes can be improved (and disparities among them reduced) by the production of more and better educational resources that are distributed more equitably among local public school districts. By *educational* resources, we mean those integral to the day-to-day work of teaching and learning in classroom instruction, including material resources (e.g., curricula, text-

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[5] For distinctions between the concepts of education systems and ecologies, see Datnow et al. (2022) and Fuller and Kim (2022).

books, and assessments); knowledge resources (e.g., research, instructional models, and pedagogical routines); and human resources (e.g., teachers, intervention specialists, and paraprofessionals). The resource-forward logic aligns with the idea of assessment resources as the mechanisms of balanced assessment systems.

In our prior research, we dated the logic of resource-forward innovation and improvement to the mid-20th century, with the onset of increasing federal engagement in public education (Peurach et al., 2022a). Beginning in the 1950s, national policy dynamics were focused squarely on advancing educational access and equity: issues driven to the center of the agenda by the civil rights movement, the women's rights movement, the disability rights movement, and the war on poverty. By 1982, the result was the development of formidable federal and state legal, policy, and financial infrastructures that ensured universal access to public schooling.

Over this period, while quality and equity played out alongside access and equity as national policy priorities, the result was not the development of commensurate, policy-level *educational infrastructure* ensuring quality and equity in students' education once in schools (Cohen et al., 2014; Peurach et al., 2019b, 2022a). Key components of such an infrastructure would have included social and political consensus on the means and ends of instruction, along with coordinated instructional models, curricula, materials, assessments, and teacher development for pursuing those means and ends. The absence of such an infrastructure owed much to disagreements in the national education ecology in defining and pursuing educational quality and equity, as well as to deep distrust in central government that limited federal and state efforts to address such matters.

Instead, ambitions for advancing quality and equity were taken up in an educational resource market that supported the exchange among non-governmental organizations (on the supply side) and districts and schools (on the demand side) of the materials, methods, programs, and people needed to constitute, enact, and improve classroom instruction.[6] Examples of these non-governmental organizations include commercial publishers, service providers, non-profit organizations, professional associations, and university research centers and projects. Dependence on the educational resource market owed much to comparative trust in entrepreneurship and free markets as drivers of social progress, as well as customary deference to local control in defining and pursuing educational quality and equity.

The educational resource market dates to the colonial era, when commercial publishers emerged as the primary suppliers of curriculum resources for newly emerging public schools. The educational resource market began developing further (and rapidly) in the second half of the 20th century, in part due to increased federal investment in producing and disseminating more and better resources to support instruction for the more (and more diverse) students gaining access to public schools.

On the demand side, this included federal block grants, formula grants, and categorical grants to states, districts, and schools that provided supplemental and discretionary funding aimed at advancing educational quality and equity, including federal policies that provided funding to support vocational education students, education-

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[6] For more on the emergence of the educational resource market and its association with the federally funded evidence infrastructure, see Cohen and Mehta (2017); Peurach et al. (2018, 2019b, 2022a); and Rowan (2002).

ally disadvantaged students, and special education students.[7] On the supply side, the expansion included federal grants and contracts aimed at fueling entrepreneurship and innovation among non-governmental and quasi-governmental organizations in order to provide resources for instruction and instructional improvement within policy-prioritized niches. Spanning both the demand and supply sides were federal efforts to develop an "evidence infrastructure" to support the production and dissemination of basic and applied research as inputs both to local practice and to the production of educational resources.

There were few barriers to entry on the supply side of the market, thus enabling the development of what, by the 1990s, would become a multi-billion dollar "school improvement industry" in which for-profit firms, non-profit organizations, and membership organizations provided resources for instruction and instructional improvement to local districts (Rowan, 2002). Even so, on the demand side, federal and state policy had not evolved by the early 1990s to include means of holding districts and schools accountable for actually using new resources to advance educational quality and equity. Instead, federal and state oversight of the use of new resources focused chiefly on the creation of new structures and programs in local districts to serve different categories of students (e.g., special education, Title I, second language, vision and hearing impaired, and gifted and talented) and on demonstrating compliance with associated rules, regulations, and requirements in administering those programs.

Absent accountability for advancing quality and equity, the policy-level press on local districts was to maintain their *structural/procedural legitimacy*: maintaining their good standing both by (a) adopting resources and initiating programs that publicly signaled commitments to advancing educational quality and equity and (b) complying with organizational and administrative requirements of federal and state funding streams.

Practice-Forward Innovation and Improvement

The theory of action underlying *practice-forward innovation and improvement* is that students' educational opportunities, experiences, and outcomes can be improved (and disparities reduced) by improving instructional practice and the school and district contexts in which it is situated. The practice-forward logic aligns with the idea in balanced assessment systems of coordinating the organization, management, and improvement of instruction in states, districts, schools, and classrooms as essential for advancing educational quality and equity.

In our prior research, we associated the onset of practice-forward innovation and improvement with two loci of activity in the national education ecology. The first was seminal organizational and policy research that, beginning in the 1960s and carrying into the 1980s, provided increasing transparency in the operations, outcomes, and improvement of local public school districts. This included research that evidenced problems and challenges, including:

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[7] Seminal federal policies include the Vocational Education Act of 1963, the Elementary and Secondary Education Act of 1965, and the Education for All Handicapped Children Act of 1975.

- ways in which local districts maintained structural/procedural legitimacy without improving instruction, its organization, or its management;
- ways in which maintaining structural/procedural legitimacy supported within-school segregation of students into academic tracks and categorical programs, with one consequence being inequities in students' educational opportunities, experiences, and outcomes; and
- a formidable and persistent achievement gap between White and Black students, despite (and, in some cases, because of) the sustained policy focus on resource-forward innovation and improvement.[8]

This also included research that evidenced potential and possibilities, including research on effective schools in which educational expectations, instructional opportunities, leadership, climate, and home-school relationships were coordinated in ways that supported the academic success of historically marginalized students.[9] This research was instrumental in effecting a shift toward "whole school" reform, with entire schools (and, later, districts) as the units of improvement.

The second locus of activity was the onset of an "excellence and equity" movement in the 1980s and early 1990s. The movement was catalyzed by the 1983 publication of *A Nation at Risk: The Imperative for Educational Reform* and energized by the historic 1989 Charlottesville Education Summit, which drove educational quality and equity to the center of the national policy agenda (National Commission on Excellence in Education, 1983; Vinovskis, 1999). The movement evolved further in the early 1990s with the introduction of *systemic reform* as a policy logic that sought to bring a stronger, more coherent instructional focus to the national educational ecology, with coordinated, state-level content standards, performance standards, and accountability assessments both (a) driving alignment through the educational resource market and (b) motivating and guiding school-wide and district-wide improvement (Fuhrman, 1993; Smith & O'Day, 1990). And the movement emerged in interaction with new calls and ideas for moving beyond didactic instruction and basic skills to ambitious teaching and learning for all students (Cohen et al., 1993).

From the mid-1990s to the present, the focus on excellence and equity has been taken up in a litany of federal, state, and national policies, initiatives, and movements.[10] These policies, initiatives, and movements are by no means a coherent, stable policy-level educational infrastructure, and they have certainly introduced problems of their own (as discussed in the next section). Even so, many of these policies, initiatives, and movements have pursued distinct points of leverage that, collectively, have asserted a comprehensive, sustained press on local districts to advance educational quality and equity by organizing, managing, and improving instructional practice in ways that

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[8] For example, on the disconnect between structural/procedural legitimacy and instructional practice, see Meyer and Rowan (1978). On the adverse effects of tracking and categorical programs, see Allington and Johnston (1989) and Oakes (1985). On the achievement gap and its relationship to resources, see Coleman et al. (1966) and Jencks et al. (1972). On resources and their use, see Cohen et al. (2003).

[9] On effective schools and districts, see Edmonds (1979) and Purkey and Smith (1983, 1985).

[10] Key examples include the Improving America's Schools Act of 1995; the No Child Left Behind Act of 2001; the Common Core State Standards in 2010; the Next Generation Science Standards in 2013; and the Every Student Succeeds Act of 2016.

they had not historically (Peurach et al., 2019b). Leading movements and points of leverage include:

- *Systems thinking* that takes entire schools and districts as the units of improvement and that aims for coherent organizational support for classroom instruction.
- *Standards and accountability* aimed at (a) raising expectations and building consensus around ambitions for student learning, instructional practice, and leadership practice and (b) motivating improvement through incentives and sanctions tied to assessments and evaluations.
- *Markets and choice* in and among public, charter, and other schools aimed at stimulating educational entrepreneurship and innovation that is responsive to the educational values and aspirations of students and families, especially students and families challenged to exercise political and social influence.
- *Data and evidence* aimed at (a) advancing disciplined, data-driven, evidence-informed analysis, planning, and evaluation in local districts and (b) incorporating evidence-based/evidence-proven resources and practices into those efforts.
- *Autonomy and professionalism* aimed at (a) preserving local authority over substantive educational matters and (b) developing teachers' and leaders' knowledge, capabilities, and values as key levers for advancing educational quality and equity (Peurach et al., 2022a).

From the mid-1990s to the present, the focus on excellence and equity has also been taken up in the educational resource market as a source of practical guidance and support, fueled by continuing federal and philanthropic investment on both the supply and demand sides of the market (Hodge et al., 2019). This includes formidable federal investment in the development and adoption of research-based/research-validated resources and programs (Peurach et al., 2018). This federal investment, in turn, has sustained the press on local districts to develop and maintain structural/procedural legitimacy.

At the same time, this sustained, three-decade-long policy focus on improving instructional practice and its school/district contexts introduced a new press on local districts to develop and maintain their *technical legitimacy*: maintaining good standing and signaling appropriate engagement by actually generating evidence of improving quality (and reducing disparities) in student outcomes. The press for technical legitimacy is strongest in academic content areas that are the primary focus of state standards and accountability policies: English language arts, mathematics, and, more recently, science.

Empowerment-Forward Innovation and Improvement

The theory of action underlying *empowerment-forward innovation and improvement* is that educational quality can be improved (and disparities reduced) by developing and mobilizing local agency and capability, broadly and inclusively, to identify and address local educational ambitions, needs, and problems. The empowerment-forward logic aligns with the idea of using balanced assessment systems not only to work within existing systems but also to bringing diverse perspectives to bear on interrogating, disrupting, and reforming existing systems to advance educational quality and equity.

To be sure, local control has been a pillar of U.S. public education since its inception, as has dependence on the educational resource market as a mechanism for advancing educational quality and equity. Yet empowerment-forward innovation and improvement problematizes the tradition of local control and calls into question an exclusive dependence on the educational resource market. As a policy logic, empowerment-forward innovation and improvement is anchored in three core premises:

- weaknesses in local agency and local capability for addressing complex educational ambitions, needs, and problems are pervasive;
- local agency and local capability are distributed inequitably and in ways that disenfranchise poor and minoritized communities; and
- policy-level ambitions for advancing educational quality and equity require a commensurate, policy-level focus on redressing variability and inequities in local agency and local capability.[11]

In our prior research, we dated the emergence of empowerment-forward innovation and improvement to the 2000s, in association with three loci of activity in the national education ecology. The first is the rise of critical perspectives on practice-forward innovation and improvement as it had emerged and developed to that point.[12] Of these perspectives, there is no shortage, including concerns with:

- the narrowing of educational purpose to students' academic (versus holistic) development; of academic focus to state-assessed contents areas; and of instruction to test preparation;
- the increasing influence of the federal and state governments, policy elites, and resource providers over local educational matters;
- the emergence of a "failing schools" narrative associating evidence of persistent underperformance with students, schools, and communities of color;
- challenges faced by parents and caregivers of historically marginalized students in exercising choice among charter, public, and other schools; and
- recognition of the systemic disempowerment and harm experienced by minoritized communities and, with that, renewed calls for equal voice and participation in defining and advancing quality and equity in their schools.

The second locus of activity is research on local efforts to organize, manage, and improve instruction to advance educational quality and equity and, with that, to establish and maintain technical legitimacy. This research suggested that demands of practice-forward innovation and improvement often exceeded local capabilities for self-improvement, especially in districts and schools that had long struggled to support the

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[11] Our conception of empowerment is consistent with Richard Elmore's principle of "reciprocity of accountability for capacity" (2002, p. 5).

[12] For critical perspectives on the logic and enactment of policies that we associate with the practice-forward logic, see Au (2010); Burch (2009); Ishimaru et al. (2019); Reckhow (2012); Spillane and Sun (2020); and Wilson and Horsford (2013).

academic success of historically marginalized students.[13] At the same time, this research also began to identify new ways to organize collaborative learning as distributed in and across districts to support the development of such capabilities.

The third locus of activity is the rise of two movements seeking to develop identity, galvanize support, and shape the agenda at the policy level: a rejuvenated racial and social justice movement and a new "improvement movement." Both movements share an internal logic: take variability and inequity in educational opportunities, experiences, and outcomes as the fundamental problem; interrogate the systems that produce that variability; and intervene on those systems either incrementally or comprehensively to advance educational quality and equity.

- With roots stretching back to access-focused advocacy in the 1950s, the racial and social justice movement has, as a primary focus, identifying and rectifying systemic inequities both in the national education ecology and in local public school districts. Chief among these inequities is the marginalization and exclusion of people of color in defining and advancing educational quality and equity.
- With roots stretching back to the advent of action research in the 1940s, the "improvement movement" has, as a primary focus, advancing disciplined approaches to collaborative, continuous improvement. These approaches have educational professionals, community members, researchers, and other stakeholders working together to understand and address problems of quality and equity in local educational contexts.[14]

These two movements are being advanced by different organizations and initiatives with distinct points of leverage that, together, are pressing for a policy-level response to variability and inequities in local agency and local capability. For example, these two movements have been championed by such organizations as the Civil Rights Project, the Learning Policy Institute, the Carnegie Foundation for the Advancement of Teaching, and the Bill and Melinda Gates Foundation. These two movements are fueled by active domains of research and scholarship in the education sector (e.g., socio-cultural learning theory, solidarity-driven co-design, improvement science, and design-based implementation research) and beyond (e.g., the advancement of critical and pragmatic approaches to knowledge production). This research and scholarship includes fundamental reconsiderations of human learning and development (National Academies of Sciences, Engineering, and Medicine, 2018; National Research Council, 2000) and of the production of knowledge (Medin et al., 2014). And these two movements have, again, been taken up in the educational resource market as a source of practical guidance and support.

While they have not yet gained solid footing in federal and state policy (and, in some cases, face active opposition), these two movements (especially the racial and social justice movement) have been instrumental in asserting a new press on local dis-

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[13] For research on the practice and knowledge demands on large-scale instructional improvement, see Cohen and Ball (1999); Cohen et al. (2014); Glazer and Peurach (2015); Peurach and Glazer (2012); Peurach et al. (2016); and Spillane and Thompson (1997).

[14] For an analysis of the relationship between the racial and social justice movement and the improvement movement in the contemporary policy context, see Peurach et al. (2022b).

tricts to establish and maintain their *moral legitimacy*: maintaining good standing and signaling appropriate engagement by cultivating agency, capability, and participation for local innovation and improvement, especially among people, groups, and communities whose perspectives and priorities have been historically marginalized.

Crafting Coherence

There is plenty in the preceding analyses that plays directly to the conventional narrative of the national education ecology as rife with fragmentation, incoherence, and turbulence. With that comes a risk that the idea of balanced assessment systems will be seen as more of the same.

For state leaders charged with supporting the idea of balanced assessment systems, there is advantage in mitigating that risk by collaborating with colleagues to ensure operational alignment among policy-level initiatives seeking to advance educational quality and equity: for example, standards-and-accountability regimes, teacher and leader evaluation policies, public-facing data dashboards, and curriculum frameworks and instructional guidance. In some states, such work may be already underway.

Even so, one problem is that state-level efforts to achieve operational alignment among policy initiatives contends with other sources of influence from the national education ecology in shaping understandings of balanced assessment systems, including the marketing campaigns of commercial assessment providers and advocacy campaigns from national testing consortia, professional associations, and academic associations. Another problem is that such efforts often come up short (e.g., Coburn et al., 2016; Polikoff, 2012a, 2012b, 2015). Yet another problem is that, even if achieved, operational alignment at the policy level is unlikely to mitigate the risk that the idea of balanced assessment systems will be seen as more of the same. As argued by Emily Hodge and Elizabeth Stosich in a study of local engagement with the Common Core State Standards:

> Even policies that appear coordinated may not be experienced as such by educators. This presents a challenge as educators are unlikely to devote the necessary attention and resources to implementing policies that they view as disconnected or contradictory, which can result in limited attention to particular policy goals and little, if any, change to practice…. Successful policy implementation requires both *aligning*, or "lining up" policy expectations, resources, and rewards/sanctions, and creating a sense of *coherence*, or a perception that policies are consistent and comprehensible to those who experience them. (Hodge & Stosich, 2022, p. 544)

For state leaders, crafting coherence centers the work of framing, narrating, and sensegiving: actively shaping how policy-level and local-level actors see, understand, and value the place and role of balanced assessment systems in the national education ecology, especially among other initiatives seeking to advance educational quality and equity (Weick, 1995; Weick et al., 2005). To the extent that the analytic framework sketched in Table 8-1 is helpful for state leaders, themselves, in seeing, understanding, and valuing the role and place of balanced assessment systems, it may also serve as a potential resource in their efforts to craft a sense of coherence for others amidst what might otherwise present as fragmentation, incoherence, and turbulence.

For example, as summarized in Table 8-1, our analytic framework has policy-level priorities for advancing educational quality and equity as a 75-year through-line stretching back to the mid-20th century. Furthermore, the framework represents accumulating policy-level understandings of the support needed to advance educational quality and equity: more and better educational resources distributed more equitably among local public school districts; improving instructional practice and the school and district contexts in which it is situated; and developing and mobilizing local agency and capability, broadly and inclusively, to identify and address local educational ambitions, needs, and problems. Still further, the framework represents the comprehensive structural/procedural, technical, and moral press on local districts to advance educational quality and equity.

And, importantly, our analytic framework associates the central ideas of balanced assessment systems with these accumulating policy priorities and understandings, such that the central ideas of balanced assessment systems amplify the structural/procedural, technical, and moral press on local districts. This includes:

- integrated assessments as resources designed to serve different purposes among different actors at the classroom, local, district, and state levels, with a particular focus on learning theories that center the development of the whole child in community;
- the aim of coordinating the practice of organizing, managing, and improving instruction from the classroom level to the state level, with a particular focus on ambitious teaching; and
- the potential for comprehensive, coherent, and continuous assessment at all levels to provide the evidence needed not only to make incremental adaptations within existing systems but, also, to bring diverse perspectives to bear on interrogating, disrupting, and reforming existing systems.

With that, our analytic framework and Table 8-1 provide a blueprint for state leaders in crafting a coherent policy narrative that positions balanced assessment systems squarely within leading lines of reasoning and action aimed at advancing educational quality and equity. One matter is how such a narrative would be taken up by local districts (a matter that we discuss below, in our analysis of "seeing and crafting" at the local level). A more immediate matter is how such a coherent narrative would be taken up by their state-level colleagues responsible for other domains of education policy. After all, new ideas are always interpreted through and grafted onto existing understandings. From that follows the risk that existing understandings might shape new ideas more than new ideas reshape existing understandings. This is an essential finding in research on instructional innovations at the level of the individual teacher (for a seminal analysis, see Cohen, 1990). There is no reason to suspect anything different for the individual policy maker.

On the assumption that policy logics accumulate in the minds of individual policy makers much as in the national educational ecology in which they live and work, our analytic framework may be useful for state leaders in speculating about the inherited understandings through which the idea of balanced assessment systems will be interpreted and understood by their colleagues. For example:

- Many state-level colleagues may understand and work within a resource-forward logic, on the belief that more and better educational resources are sufficient to advance educational quality and equity. Such colleagues would be disposed to recognizing the *mechanisms* of balanced assessment systems.
- Some colleagues may go further to also understand and work within a practice-forward logic, on the assumption that standards, evidence, and accountability will be sufficient to evoke new behaviors in districts, schools, and classrooms that advance academic outcomes. Such colleagues would be positioned to recognize the *practical ambitions* of balanced assessment systems.
- Fewer colleagues are likely to understand and work within an empowerment-forward logic, with commitment to developing and mobilizing local agency and capability, broadly and inclusively, to identify and address local educational ambitions, needs, and problems that may go beyond (or reframe) academic outcomes. Such colleagues would be positioned to recognize the *theory of action* of balanced assessment systems.

Variation in inherited understandings, in turn, suggests a formidable challenge for state leaders in crafting coherence. As a precondition for understanding the idea of balanced assessment systems, state leaders will need to collaborate with their colleagues to explicate, reflect critically upon, and likely further develop the fundamental policy logics that structure their understandings and work. Absent efforts of this sort, the risk is that, however coherent the narrative, the idea of balanced assessment systems will be misunderstood among their state-level colleagues: for example, as new resources that warrant no more than structural/procedural compliance; as new expectations for improving professional practice, absent support for developing professional capabilities; and as new ambitions for advancing educational quality and equity, absent efforts to cultivate inclusion and agency among historically marginalized groups and communities.

SEEING AND CRAFTING AT THE LOCAL LEVEL

In the United States, local public school districts shoulder primary responsibility for organizing, managing, and improving their essential educational work—instruction, teaching, and learning—in ways that mediate between the national education ecology and local ambitions for students' educational opportunities, experiences, and outcomes. Our next step, thus, is to take up the matter of seeing systems and crafting coherence at the local level, with the aim of developing shared understandings of the place and role of balanced assessment systems among local efforts to advance educational quality and equity.

Unlike the national education ecology, local districts are more meaningfully examined as systems: again, collections of organizations intentionally designed and structured to work in interaction, with shared purpose and toward a common goal. But this is not to say that this "systemness" has local districts any less complicated than the national education ecology. Rather, as systems, they vary remarkably in form and gov-

ernance, including conventional geopolitical public school districts overseen by local school boards, charter school networks overseen by state-approved authorizing agencies, and "turnaround districts" overseen by state-appointed boards. Moreover, different districts have different combinations and configurations of elementary, middle, and/or high schools.

The conventional narrative is that policy-level fragmentation, incoherence, and turbulence has fostered fragmentation, incoherence, and turbulence within local districts. This narrative has central offices and schools attending to changing policy ambitions, priorities, and requirements that they see as most important and relevant to their work, each in their own locally sensible way.

But, again, as represented in Table 8-1, we have identified structure and order in ways that districts have co-evolved with the national education ecology: specifically, as *school* systems, *education* systems, and *learning* systems.[15] Each of these system types is characterized by different functional capabilities for organizing, managing, and improving instruction to advance educational quality and equity. Each is a response to an associated, policy-level focus on *resources*, *practice*, and *empowerment* and, with that, an associated press to maintain *structural/procedural*, *technical*, and *moral legitimacy*. As such, these system types form a taxonomy—a developmental progression—that frames the accumulation of functional capabilities in local public school districts in response to accumulating policy logics and legitimacies in the national education ecology.

Our central line of argument is that, by seeing and understanding this developmental progression from *school* systems to *education* systems to *learning* systems, state and local leaders will be better positioned to assess the current capabilities of local districts in advancing educational quality and equity; their capacity to engage the idea of balanced assessments systems less-or-more comprehensively; and ways in which fuller engagement with the idea of balanced assessments systems may require developing categorically distinct functional capabilities to organize, manage, and improve instruction.

School Systems

As we define it, a *school system* is a local district distinguished by highly developed capabilities for organizing, managing, and improving *access to public schooling*, but comparatively weak capabilities for organizing, managing, and improving the *educational work* of teaching and learning once students are in schools. Our contention is that districts that have evolved only as school systems are most apt to recognize the mechanisms of balanced assessments systems and to engage through structural/procedural compliance.

The evolution of districts as school systems predates the increased policy focus on resource-forward innovation and improvement in the mid-20th century. By that point, local districts had been under a century-long societal and policy press to establish and institutionalize mass public schooling to increase access to instruction for more (and more diverse) students: for example, through the common schools movement, the introduction of compulsory attendance and truancy laws, mass immigration, and urbanization.

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[15] For our conceptual development of school, education, and learning systems, see Datnow et al. (2022) and Peurach et al. (2019a, 2019b, 2022a).

From this century-long press for mass public schooling emerged the organizational template of what would become widely recognized, valued, and understood to be a local public school district (e.g., Callahan, 1964; Cuban, 1988; Tyack, 1974). Key characteristics included:

- the emergence of a central office to administer schools, staffed by professional administrators and accountable to a democratically elected local school board;
- structural differentiation between levels of schools (elementary, middle, and high schools) and within schools (grade levels, academic content areas, and academic tracks—college preparatory, general education, and vocational); and
- a conventional distribution of labor, with local central office and school leaders responsible for managing both political relationships and administrative requirements, and with teachers responsible for managing the educational work of classroom instruction.

From this century-long press for mass public schooling also emerged a conventional approach to organizing, managing, and improving instruction: one that we describe as *sorting*, *resourcing*, and *delegating* (Peurach et al., 2019b). Central office and school leaders provided access to instruction by sorting students into schools, grade levels, academic tracks, and classes. They resourced those instructional venues with teachers, curriculum frameworks, textbooks, and other instructional materials and guidance, supported primarily by local tax revenues. And they delegated to teachers primary responsibility for organizing and managing the day-to-day work of classroom instruction for the students assigned to them using the resources afforded them.

Indeed, the century-long emergence and institutionalization of a historically novel organizational form—local public school districts—across a rapidly growing, rapidly changing, and remarkably diverse country yielded an odd result: homogeneity. With much to predict variation in structure and practice, scholars instead described the emergence and institutionalization of "the grammar of schooling" and the "one best system," with a "real school" being one that heeded this grammar (e.g., Metz, 1989; Tyack, 1974; Tyack & Cuban, 1997; Tyack & Tobin, 1994).

This comparatively strong focus on the structure of local public school districts was *cultural*, in that it came to be recognized, valued, and understood in ways just described; *functional*, in that it supported access to instruction for more (and more diverse) students; and *pragmatic* in multiple ways, including bringing public schooling into alignment with continuing education, career, and vocational opportunities for students as they exited. The comparatively weak focus on the educational work of classroom instruction owed much to local dynamics that paralleled those in the broader national education ecology: the lack of social agreement on the means and ends of instruction, and the political challenges and risks for local central office and school leaders in attempting to forge that agreement.

Beginning in the middle of the 20th century, policy-level priorities and initiatives in the national education ecology as described above (under "See and Crafting at the Policy Level") did not disrupt these local-level dynamics: that is, the onset of increasing federal engagement in public education; the press for expanding equitable access to public schooling; the onset of resource-forward innovation and improvement aimed

at advancing educational quality and equity; and the press for structural/procedural legitimacy. To the contrary, these local dynamics were the very frame through which local public school districts apprehended and responded to those policy-level priorities and initiatives. For example:

- Local public school districts created new categories of schools (e.g., magnet schools) and new instructional venues (e.g., special education, Title I, second language, vision and hearing impaired, and gifted and talented) into which they sorted students whose education was newly prioritized and supported by federal funding.
- Local public school districts used new sources of federal and other discretionary funding to leverage the educational resource market to adopt new materials, programs, and services, with these new resources symbolizing engagement with the policy press to advance educational quality and equity.
- Absent agreement or accountability on matters of educational quality and equity, local public school districts maintained structural/procedural legitimacy by providing evidence of compliance with associated regulations and requirements, while continuing to delegate primary responsibility for day-to-day classroom instruction to teachers.

By the late 1970s and early 1980s, organizational researchers were describing local public school districts as "loosely coupled systems" rife with structures and resources, but with weak capabilities in central offices and schools to organize, manage, and improve the day-to-day work of teachers and students in classroom instruction (Meyer & Rowan, 1978). In that this arrangement was sufficient to maintain legitimacy and good standing, they also described it as a rational response to policy-level and local-level contexts that lacked agreement on the meaning and methods of advancing educational quality and equity.

Education Systems

As we define it, an *education system* is a local district distinguished by capabilities among central offices and schools to collaborate with teachers to organize, manage, and improve the educational work of public schooling—instruction—with the aim of improving educational quality and reducing educational disparities. Districts heeding the press to evolve as educational systems are more apt to recognize the practical ambitions of balanced assessment systems and to engage in ways aimed at improving technical effectiveness (and not in ways that are simply structural and procedural).

In our past research, we associated the evolution of districts as educational systems with the onset of practice-forward innovation and improvement at the policy level and, with that, the press for technical legitimacy (Peurach et al., 2019b, 2022a). As sketched above, the onset of the practice-forward policy logic coincided with:

- the establishment of universal access to public schooling, thus institutionalizing the policy-level press on local educational enterprises to sustain as access-providing school systems;

- the accumulation of research providing increased transparency in the operations of local public school districts, including sorting, resourcing, and delegating as a root cause of low quality and inequitable educational opportunities, experiences, and outcomes for many students;
- the advent of an excellence and equity movement; the onset of new calls and ideas for ambitious teaching and learning; the introduction of policy initiatives advancing new ideas and priorities for systems thinking, standards and accountability, markets and choice, data and evidence, and autonomy and professionalism; and the consequent press on districts to improve instructional practice and its school/district contexts.

At the local level, one effect was to disrupt homogeneity in the structure and governance of public school districts, with the introduction and proliferation of charter school networks, within-district school choice, mayoral control, and state turnaround and takeover districts. As sketched above, another effect was increased dependence on the educational resource market for new (and new categories of) materials, programs, and services.

Yet another effect was the emergence of new patterns in the organization, management, and improvement of instruction. Beginning in the 2000s, new research examining the organization and operations of local public school districts detailed the emergence of new domains of activity distributed among central offices and schools that, when managed coherently and with coordination, supported teachers in improving instructional practice in ways that advanced educational quality and reduced educational disparities (e.g., Bryk et al., 2010; Cobb et al., 2018; Forman et al., 2017; Johnson et al., 2014). In a comprehensive review of this research, we summarized this new activity as five core domains of work enacted by central office and school leaders, often in collaboration with teachers (Peurach et al., 2019b). These domains include:

- *Managing environmental relationships* to discern, bridge, buffer, and reconcile the many influences bearing on how districts understand and pursue quality and equity in classroom instruction.
- *Building educational infrastructure* that coordinates visions for instructional practice, formal organizational resources (instructional models, curricula, routines, and assessments), and social organizational resources (norms, values, and relationships among teachers, leaders, and students).
- *Supporting and integrating the use of educational infrastructure in practice* by developing teachers' professional knowledge and capabilities through such means as workshops, practice-based coaching and mentoring, and collegial learning.
- *Monitoring and managing performance* both for continuous improvement (e.g., via iterative implementation, evaluation, and refinement of infrastructure and supports) and for accountability (e.g., via the use of evidence and standards to assess quality and equity in student outcomes).
- *Developing and distributing instructional leadership* beyond established administrative positions to new leadership roles and structures responsible for performing, coordinating, and managing the preceding domains of work.

We found nothing in our review (nor in our subsequent research) to suggest a tectonic shift in these directions within local districts, nor homogeneity in the ways that districts are taking up these core domains of work. While some districts are advancing comprehensive strategic plans, others are developing these capabilities more incrementally and organically. Moreover, efforts to develop these capabilities appear to be concentrated in academic content areas that are the primary focus of state standards, assessment, and accountability (English language arts, mathematics, and science), though with different urgency in different schools and levels of schooling (elementary, middle, and high schools) depending on district priorities. And districts appear to be developing, distributing, and coordinating these capabilities differently among central offices and schools in accord with different theories of action, as categorically distinct types of educational systems (Peurach et al., 2019b, 2019c).

Learning Systems

As we define it, a *learning system* is a local district distinguished by capabilities to engage diverse stakeholders (professional, family, and community) in collaborating to develop the shared understandings, knowledge, and values needed to identify and address local educational ambitions, needs, and problems. Districts heeding the press to evolve as learning systems are more apt to recognize balanced assessment systems as supporting both incremental improvement and transformative change, and to engage from perspectives that are both technical and moral (and, again, not simply structural and procedural).

In our past research, we located the onset of this evolution toward learning systems at the intersection of practice-forward and empowerment-forward innovation and improvement, and in the interdependence between the press for technical and moral legitimacy (Peurach et al., 2019b, 2022a). As sketched above, the emergence of empowerment-forward innovation and improvement was motivated, in part, by research suggesting both (a) weaknesses in local capabilities to organize, manage, and improve instruction in response to new accountability demands and (b) potential to organize local districts in new ways to support continuous learning and improvement. Subsequently, it has been driven by a policy-level improvement movement aimed at developing capabilities and agency among diverse local stakeholders to use formal methods of collaborative, continuous improvement to understand and address local educational problems, needs, and opportunities, as well as by academic, intellectual, and social movements pressing for new approaches to equity and justice in the goals and work of educational improvement.

Local-level engagement is nascent: some self-initiated and self-guided, and more through grant-funded initiatives in association with external organizations (with leaders including the Strategic Education Research Partnership, the National Center on Scaling Up Effective Schools, the National Network of Education Research-Practice Partnerships, and the LearnDBIR initiative in the Research+Practice Collaboratory). Evidence of such engagement lies in the annual Carnegie Summit for Improvement in Education, which, since 2014, has supported thousands of participants (most from local districts) in developing capabilities for collaborative, continuous improvement. This includes local educational enterprises that have been identified as exemplars for

producing evidence associating the rigorous application of improvement methods with evidence of improving quality (and reducing disparities) in student outcomes (Bryk, 2020).

In our own research, we initially framed the evolution of districts as learning systems in terms of their emergence and development as "scientific-professional learning communities" that use rigorous methods of continuous improvement to produce, use, and refine the practical knowledge needed to advance educational quality and equity in locally responsive ways (Russell et al., 2017, 2019). Our initial efforts focused on a particular approach for enacting and organizing collaborative, continuous improvement: improvement science in networked improvement communities. We have since elaborated our framework as a general resource for examining the structures, norms, and capabilities essential for districts to productively function as learning systems. These structures, norms, and capabilities include:

- networked organizational structures and roles that connect and engage diverse teams (a) within and between local sites and (b) with partner organizations;
- a culture in which team members share a collective, evidence-based orientation to advance more equitable educational outcomes;
- capabilities to use formal methods of collaborative, continuous improvement to iteratively analyze systemic causes of educational weaknesses and disparities, to design and test interdependent interventions, and to evaluate effects on student outcomes;
- formal structures for collecting and exchanging data and for accumulating and managing practical knowledge;
- means of aligning and coordinating with other school and district initiatives; and
- leadership capabilities distributed among sites and partner organizations to structure, manage, and continuously improve the preceding structures, norms, and capabilities.

The preceding developments have played out in interaction with other policy-level dynamics that sit at the intersection of practice-forward and empowerment-forward innovation and improvement, including both (a) the rise of critical perspectives on practice-forward innovation and improvement and (b) the reinvigoration of a racial and social justice movement in education calling for participation of marginalized groups and communities in identifying and rectifying systemic inequities.

With the twin press to maintain both technical and moral legitimacy, some of these policy dynamics have led to the evolution of districts as education systems, including:

- the development of educational infrastructure that includes visions for holistic student development, culturally responsive pedagogies and curriculum materials, and norms of inclusion and mutual respect;
- the incorporation of equity audits into performance management; and
- the development of new leadership roles charged with advancing diversity, equity, inclusion, and anti-racism.

Other of these policy dynamics have led to the evolution of districts beyond scientific-professional learning communities to more democratic, inclusive learning systems. This evolution has been driven, in part, by complementary efforts at the policy level and the local level to bring the improvement movement into closer engagement with the racial and social justice movement. Examples include efforts by researchers to integrate commitments to diversity, equity, and inclusion into the principles and methods of continuous improvement; efforts to engage historically marginalized communities in using formal methods of continuous improvement to co-design educational interventions; the proliferation of research-practice partnerships that aim to integrate improvement and equity; and a landmark philanthropic effort—the Bill and Melinda Gates Foundation's Networks for School Improvement Initiative—that has sought to integrate equity commitments into network-based improvement efforts to advance secondary school experiences and outcomes for students of poverty and color.[16]

Crafting Coherence

Thus, there is much in our local-level analysis that plays directly to the conventional narrative, with differences in resources, structures, capabilities, and commitments between and within public school districts as artifacts of policy-level fragmentation, incoherence, and turbulence. There is much to suggest that there is more structure and order to the ways that districts organize, manage, and improve instruction than meets the eye. And there is much to suggest that this structure and order will serve as a frame through which districts apprehend and making meaning of the idea of balanced assessment systems.

Even if state leaders craft a coherent narrative that "gives sense" to the role and place of balanced assessment systems among other policy-level initiatives seeking to advance educational quality and equity, much depends on how local districts make sense of that message among many others. Organizational scholars would describe this as local districts "enacting" their policy contexts: looking beyond their boundaries; noticing some things; failing to notice others; intentionally ignoring still others; and making interpretations and judgments about what that they notice means and how they should act in relation (Weick, 1979).

How districts, as organizations, make sense of and respond to their policy contexts is, in part, a function of their current capabilities. Organizational scholars describe this in terms of districts' "absorptive capacity": their ability to recognize the meaning and value of new information, incorporate it into current understandings and ways of working, and act on it (Cohen & Levinthal, 1990; Farrell & Coburn, 2017). More commonly, the relationship between absorptive capacity and current capabilities is the gist of what is known as the Matthew effect: Those with advantage readily accumulate more advantage at an increasingly rapid rate, while those who lack advantage struggle to accumulate more advantage and become increasingly disadvantaged by comparison. How districts make sense of and respond to their policy contexts is also linked to frameworks describing the likelihood that organizations will adopt innovations: early

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[16] For efforts that bring the improvement movement into closer dialogue with the racial and social justice movement, see Bush-Mecenas (2022); Ghiso et al. (2022); Hinnant-Crawford (2020); Ishimaru et al. (2019); and Peurach et al. (2022a). For specific analyses associating *learning systems* with commitments to empowerment, see Yurkofsky et al. (2020).

adopters having dispositions to search for novel tools, resources, and ideas, along with the capabilities to assimilate and leverage them; majority adopters (early and late), less so; and laggards, even less so (Rogers, 2010).

By this line of reasoning, how district leaders apprehend and make meaning of the idea of balanced assessment systems will be a function, in part, of their current capabilities for organizing, managing, and improving instruction: that is, where they lie along the developmental progression from *school system* to *education system* to *learning system*.

- Districts that are evolving as learning systems are positioned to perceive and understand the idea of balanced assessment systems at its fullest: its mechanisms, practical ambitions, and theory of action. Such districts are also positioned to engage in ways that establish their structural/procedural, technical, and moral legitimacy.
- Districts that are evolving (or that have evolved) as education systems are positioned to partially perceive and understand the mechanisms and practical ambitions of balanced assessment systems, and possibly its notions of incremental improvement within existing systems. Such districts are also positioned to engage in ways that establish their structural/procedural legitimacy and technical legitimacy.
- Districts that have only evolved as school systems are positioned to perceive and understand only the mechanisms of balanced assessment systems. Such districts are also positioned to engage in ways that establish their structural/procedural legitimacy.

The distribution of districts among these categories is not clear. However, in that the policy dynamics motivating their evolution vary from institutionalized to emergent (and from centuries old to years old), one conjecture would be that there would be few that are evolving as learning systems, some that are evolving as education systems, and some that have not evolved beyond school systems.

For state leaders charged with crafting a coherent introduction to the idea of balanced assessment systems, our analytic framework as summarized in Table 8-1 suggests advantage in complementing the type of policy-level narrative sketched above (in "Seeing and Crafting at the Policy Level") with differentiated messaging that anticipates predictable variation in local-level sensemaking. Our analytic framework also suggests advantage in going further, by couching any messaging about balanced assessment systems in visions for the progressive development of capabilities in districts that would enable them to respond more fully to policy-level ambitions for advancing educational quality and equity.

For district leaders charged both with making sense of the idea of balanced assessment systems and with crafting a coherent, local-level interpretation of their role and place in the district, this local-level framework of *school*, *education*, and *learning* systems has at least four potential uses.

- It can serve as a framework through which to interpret the idea of balanced assessment systems more richly, in ways that transcend the level of extant capabilities in the district.

- It can serve as a diagnostic tool for self-analyzing the district's current level of capabilities to organize, manage, and improve instruction to advance educational quality and equity—and, thus, its readiness to engage the idea of balanced assessment systems (as well as the level at which it is ready to engage).
- It can serve as a framework for envisioning the further development of the districts' capabilities to advance educational quality and equity and, with that, its potential for higher levels of engagement with the idea of balanced assessment systems.
- It can serve as a resource for developing, implementing, and institutionalizing other complex educational innovations, ranging from multi-tiered systems of supports in elementary schools to graduation "on track indicators" in high schools.

LEARNING WHILE LEADING

Our focus on introducing the very idea of balanced assessment systems has taken our analysis some distance away from conventional understandings about developing, implementing, and institutionalizing educational innovations. As such, we continue with a fuller discussion of what the work of "seeing and crafting" implies for state and local leaders. Specifically, we explore the need for state and local leaders to engage in two challenging tasks simultaneously: *learning* to see systems and to craft coherence while, at the same time, actually *leading* the work of introducing balanced assessment systems in their respective contexts.

The Learning Imperative

Our analysis in the two preceding sections has state and local leaders orchestrating individual-level and organizational-level social learning processes that bring a complex, systemic innovation (balanced assessment systems) into engagement with institutionalized-but-evolving understandings of educational policy, organization, and practice. These learning processes have state and district leaders needing to develop shared schema among colleagues and in organizations to apprehend (and to give meaning to) policy and reform activity as it has accumulated (and continues to accumulate) at the state and local levels. That, in turn, requires explicating existing schema, reconciling differences between the new and the old, and calibrating expectations appropriately and developmentally.

Our analysis suggests that engaging in these learning processes is essential for fully understanding the meaning and place of balanced assessment systems in advancing educational quality and equity. Absent such work, the greatest risk, in our view, is that the idea of balanced assessment systems will be apprehended and taken up only within the deeply institutionalized status quo: as resources that require structural and procedural compliance, thus engaged symbolically and ritualistically—with little bearing on practice, and with little critical examination of the systems in which practice is situated (Peurach et al., 2018, 2019b; Yurkofsky, 2020).

Our prior research on building and rebuilding systems predicts that the work of seeing systems and crafting coherence will be exceedingly complex, and rife with dilem-

mas and paradoxes that complicate charting clear paths forward (Cohen et al., 2014, 2018; Peurach et al., 2019a; Seeber et al., under review; Yurkofsky & Peurach, 2023). Chief among these dilemmas and paradoxes is what organizational scholars describe as "the paradox of embedded agency": State and local leaders are products, inhabitants, and stewards of the very systems that they aim to improve, thus constrained cognitively, practically, and politically in imagining and pursuing alternatives (Garud et al., 2007).

Managing these dilemmas and overcoming the paradox of embedded agency will challenge state and district leaders to develop opportunities for *their own collegial learning* as they work through the inevitable false starts, variable uptake, and difficult-to-discern progress endemic to building shared meaning and understanding of such a complex idea as balanced assessments systems both among themselves and in complex policy-level and local-level contexts. Again, this type of sensemaking and sensegiving—conducted iteratively, in the context of practical work—is, fundamentally, a social learning process.

To explore the challenge of learning while leading, we continue by drawing on two approaches to constructing and supporting leaders' social, practice-based learning. The first is the development of a "learning lattice" for educational leaders that coordinates horizontal and vertical learning opportunities between and within states and districts. The second is the development of "learning systems" as discussed above: that is, of collaborative, continuous learning and improvement in network contexts.

The Learning Lattice

Despite the learning imperative as discussed above, the history of lackluster results from educational reforms in the United States converges on a common theme: Reforms seeking to improve teaching and learning often fail to produce the changes in educator understanding and practice needed to achieve their aims. This is, in part, a result of educators at all levels of the system not having sufficient opportunities to learn the new practices required of the reform.[17]

Again, if balanced assessment systems are to break from this pattern, state and local leaders charged with developing, implementing, and institutionalizing them will need opportunities to learn about balanced assessment systems while, at the same time, orchestrating learning opportunities for others at the state, district, and school levels. This is no small challenge, given the complexity of the idea of balanced assessment systems: a reform that requires a high degree of coordination and interdependence in the understandings and practices of educators at the state, district, school, and classroom levels.

Taking inspiration from efforts to build leadership capacity for school-level improvement in England, Jonathan Supovitz builds a vision for a "learning lattice" that integrates formal and social learning opportunities for school leaders (Supovitz, 2014). Within this design, a central leadership development program creates and supports formal learning opportunities, while lateral social networks among leaders create ongoing opportunities for idea exchange, mentorship, and collaborative problem solving.

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[17] For leading research on the learning demands of instructionally focused policy, see Cohen and Barnes (1993); Cohen and Hill (2001); Hubbard et al. (2006); Spillane (2000); and Stein and Coburn (2008).

The learning lattice is enacted within a broader framework for school leadership that provides clear guidance for leaders at multiple levels of organization, including school principals, assistant principals, and department chairs or lead teachers.

We find this notion of a learning lattice relevant as we think about the learning demands of balanced assessment systems, though we extend the design to include leadership learning opportunities at the state and district levels. We imagine a role for intermediary organizations or university-based partners with specific expertise to create formal learning opportunities about balanced assessment systems that are made broadly available through massive open online courses or other online learning formats. Complementing formal learning opportunities, we see the need to focus on the development of more informal or lateral connections among educators to support them in learning while leading.

A Lattice of Learning Opportunities for State Leaders

We can imagine state leaders benefitting from opportunities to learn collaboratively with other leaders charged with developing, implementing, and institutionalizing balanced assessment systems, as well as cross-state learning opportunities for exchanging ideas with colleagues in other contexts. We also imagine such learning opportunities as a context in which state leaders could leverage the policy-level framework sketched in Table 8-1 to structure and inform their collaborative learning.

A research-practice partnership emerging from the work of the English Learner Collaborative of the Council for Chief State School Officers (CCSSO) presents a compelling model for organizing this kind of learning opportunity. State education agency (SEA) professionals are charged with implementing state and federal policy, dispersing resources, and providing guidance for schools related to the education of multilingual learners. Their learning needs emerged in the CCSSO's English Learner Collaborative and led to the establishment of a research-practice partnership to build capacity to promote equity for multilingual learners (Hopkins et al., 2022; Weddle et al., under review).

Coordinated through a research-practice partnership, this learning community includes 20 SEA leaders and their research partners from across the country. The partnership has been meeting every 3 weeks for 2.5 years in the form of small groups organized around relevant problems of practice, such as strategizing about the most productive use of multilingual learner funds and developing supports for multilingual learners with disabilities. Researchers share ideas about evidence-based practice, such as the need to foster shared responsibilities for multilingual learner success across the state, districts, and schools, which are then taken up in the collaborative work of small groups. Overall, the researchers report that SEA professionals are hungry for connections with peers, with the partnership filling a need for social learning that is not readily available in their state agency contexts.

We see great potential in the formation of similar research-practice partnerships as learning communities that support SEA professionals charged with catalyzing the movement toward balanced assessment systems. Several existing initiatives appear to present opportunities: for example, the CCSSO's Balanced Assessment System State Collaborative, the Technical Issues in Large-Scale Assessment (TILSA) Collaborative, and the Chief Academic Office Collaborative. However, these are typically three times

per year convenings, and not the frequent meetings of the Early Learning Collaborative's learning community as coordinated within a research-practice partnership. Refashioning these existing collaboratives as rigorous research-practice partnerships that could support the learning of state leaders would require commitment to more regular engagement in structured collaborative learning.

A Lattice of Learning Opportunities for Local Leaders

As state leaders advance their own learning, we imagine them also coordinating networks of districts working collaboratively to advance balanced assessment systems. For inspiration, we point to the case of the Tennessee Mathematics Coaching Project (Russell et al., 2017). Recognizing a need to expand learning opportunities for teachers related to the implementation of ambitious mathematics standards, state leaders in Tennessee partnered with researchers and professional development providers to create a network of instructional leaders (i.e., coaches) in districts throughout the state. The network created structured learning opportunities that coaches took back to their local sites of practice and shared with local colleagues. Additionally, coaches systematically tested ways to integrate evidence-based coaching practices into their local systems and shared what they were learning with the network (Russell et al., 2020). As the project converged on a model for mathematics instructional coaching that could be implemented at scale, the state organized structured learning opportunities for district leaders through its regional units.

Other states could similarly convene networks of district leaders to develop a shared vision for balanced assessment practice and to grapple with the problems of practice inherent with a move toward this vision. Similarly, we can envision districts coordinating networks of schools working collaboratively to develop strategies for implementing balanced assessment systems.

Regarding district-coordinated networks, a helpful model is the work of the Baltimore Secondary Literacy Improvement Community, which is organized by the Baltimore City Schools.[18] The district convenes a network of "teaching fellows" who collaborate across schools to identify new ways to rapidly improve students' reading skills. Patterned after the networked improvement community model, district leaders create structured opportunities for teachers to test ways to develop secondary students' reading competencies. Teachers representing teams in schools throughout the district meet as working groups that tackle specific components of the literacy problem (e.g., fluency, vocabulary). In network convenings and through strategic knowledge management practices, teachers share what they are learning so that promising practices can spread across schools.

We imagine networks of this sorts as contexts in which local leaders, themselves, could learn about (and from) the work of crafting a coherent vision for the introduction of balanced assessment systems, observing teachers as they enact and operationalize that vision, and working iteratively with teachers to refine both the vision and its enactment.

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[18] See https://www.baltimorecityschools.org/progress-BSLIC-fellows.

KEY TAKEAWAYS

Our view is that success developing, implementing, and institutionalizing balanced assessment will depend on orchestrating the learning of state and local leaders, beginning with developing shared understandings of the very idea of balanced assessment systems and of their place among other initiatives aiming to advance educational quality and equity. Such learning benefits from a comprehensive, historical perspective on the co-evolution of national policy contexts and local districts, as well as from insights into novel approaches to organizing collaborative, practice-based social learning. Our view holds for any comprehensive, practice-focused systems improvement initiative aiming to advance educational quality and equity through instructional improvement.

We are not alone in calling for increased attention to the learning demands of balanced assessment systems. Rather, this call runs thick through the other chapters in this volume, which emphasize the need for clear, coherent communications and messaging about the ideas of balanced assessment systems; the need to develop professional learning infrastructures and resources; the potential benefits of research-practice partnerships; and the need to establish an agenda and climate for learning in districts and schools.

The promising news is that a variety of models have emerged in the education field for organizing collective learning and improvement to drive the understanding and enactment of complex, distributed, instructionally focused reforms. The cases that we present in our discussion of "Learning While Leading" immediately above share two common features. First, implementation is viewed as a learning problem, and leaders at the state, district, and school levels engaging in collaborative problem solving. The novel emphasis is on building lateral connections among educational professionals who have not often had opportunities to work with role-alike leaders in other contexts. Second, each of these cases benefits from collaboration with external research partners.

Federal and philanthropic investment in the development of research partners to support such learning processes has thus far been weak as compared to other research investments (Peurach et al., 2018). While a scarce resource, such research partners have potential to provide analytical capacity to productively integrate evidence-based practices with practitioner knowledge in ways needed to understand and implement complex, distributed, instructionally focused innovation and improvement.

This, in our view, is the frontier of U.S. education reform: empowering diverse stakeholders to collaborate in advancing educational quality and equity through the development of inclusive, evidence-based, practice-focused learning systems. For proponents of balanced assessment systems, the most fundamental challenge is to collaborate with state and district leaders to create for themselves exactly the types of learning systems that they must strive to create for others.

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