Networked Improvement in the US and England:

A New Role for the Middle Tier

Joshua L. Glazer

The George Washington University

Toby Greany

The University of Nottingham, UK

Megan Duff

Teachers College, Columbia University

William Berry

The George Washington University

As education systems across the globe confront increasingly lofty demands for rigor and equity, there is a growing need to investigate the ways in which practice-based knowledge - whether derived from professional expertise, classroom, school and system-level data, and/or external research - is generated, shared, and used by teachers and school leaders across diverse contexts. More simply, we need to better understand how and why educational outcomes vary for different groups of children and across different types of schools to find ways to reduce this variation through disciplined learning and the systematic application of practical knowledge. This chapter seeks to advance that agenda by focusing on what we refer to as "middle-tier" organizations (MTOs), such as district central offices, local authorities, charter management organizations (CMOs), and other school support organizations that play a critical role in large-scale school improvement efforts.[i]

Our interest is both practical and theoretical. On a practical level, MTOs are well situated to promote equitable outcomes at scale. They operate multiple schools and can exert influence over curriculum, instruction, hiring, leadership, professional development, and other issues that bear directly on teaching and learning. Additionally, the smaller size of MTOs compared to national or regional government agencies allows them to shape school-level processes on a more granular level than is otherwise possible. Moreover, despite the increase in research-practice partnerships that establish a formal role for researchers in school and district improvement, system-wide improvement largely depends on the capacity of traditional districts and other such MTOs operating without the direct guidance of researchers. Theoretically, middle-tier organizations provide a context to better understand how educational organizations can generate, interpret, and use knowledge to make incremental improvements across a system of schools. For

example, differences in the organizational composition of MTOs offer an opportunity to better understand how structural factors shape opportunities for knowledge use, continuous improvement, and equitable outcomes.

Theoretical Framework

Organizational Learning

What issues might determine the ways in which MTOs generate and use knowledge? Theoretical work into organizational learning highlights the combination of structures, routines, and culture that predispose an organization to exploit technologies and ideas in its environment (Argyris & Schön, 1978; Lipshitz, Friedman, & Popper, 2007; March & Simon, 1993). For example, scholars working within the "absorptive capacity" framework posit that organizations' ability to interpret, integrate, and use new knowledge is dependent on a variety of organizational attributes. Such attributes include the extent and nature of existing knowledge, systems for monitoring the environment, and internal communication structures that ensure dialogue and coordination within the organization (Zahra & George, 2002). Researchers further maintain that external stimuli that challenge existing operations can encourage organizations to develop new competencies and enter into "new alliances with other organizations that have other competencies" (Holmqvist, 2003, p 108-109).

These and other theoretical perspectives see the dissonance between pre-existing assumptions and new knowledge as fertile ground for learning. For example, research into developmental evaluation highlights the importance of organizational members continuously reflecting on and revising their underlying rationales in light of experience and evidence (Peurach & Glazer 2014; Lenhoff, et al. 2020). Similarly, sociocultural learning theorists

highlight the "negotiation" process in which new evidence and ideas are pitted against existing frameworks for action, dominant norms, and long-standing beliefs (Honig, 2008).

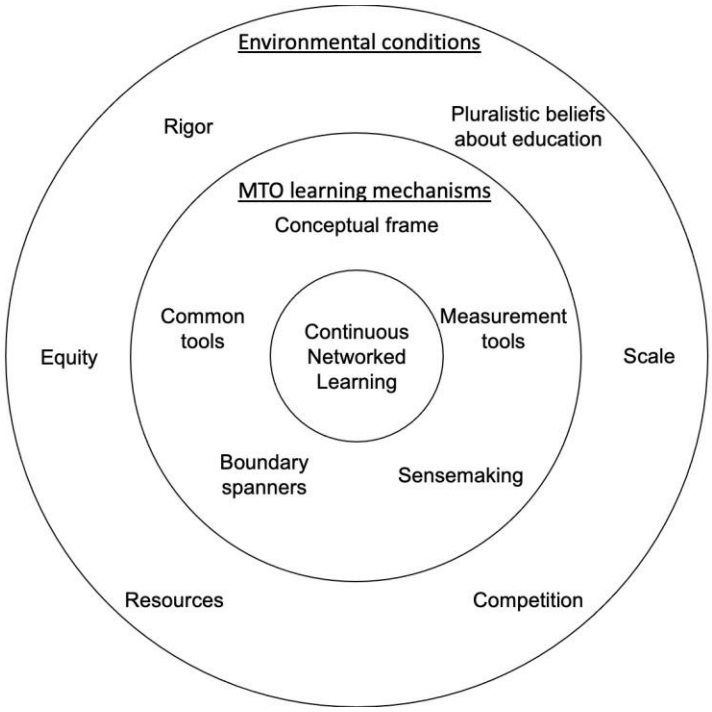
Following this literature, we consider the organizational traits of MTOs according to five dimensions which appear integral to the generation and use of knowledge: (1) a shared conceptual framework that enables organizational members to collectively make sense of experience and outcomes in ways that generate common insights and knowledge; (2) common routines and tools that tie practitioners into a singular technical culture and problem-solving system; (3) boundary spanning roles and structures that facilitate the transfer of knowledge across internal organizational boundaries; (4) shared sensemaking structures that enable practitioners to collectively puzzle over outcomes, share experiences, and interpret data; and (5) a measurement system by which performance and outcomes can be evaluated in agreed-upon ways, informing further improvements to the other four dimensions.

Educational environments

If organizations' capacity to learn is shaped by the internal processes, routines, and tools noted above, it is further influenced by the macro and meso-environments in which organizations are situated. This relationship between environments, on the one hand, and knowledge use and learning on the other can also be understood as the conjoining of organizational learning theory with another theoretical tradition: new institutionalism. New institutionalism sees organizational behavior as interdependent with larger social and political structures that ascribe meaning and legitimacy to symbols and practice. Social institutions-- e.g., the state, markets, religion, professions-- represent cultural frameworks that provide the building blocks with which organizations establish material and symbolic practices that, in turn, constitute organizational operations and culture (Friedland & Alford, 1991; Thornton Ocasio, & Lounsbury, 2012). In

education, environmental currents are a mélange of contemporary and historical factors that include a fractured, pluralistic environment home to numerous beliefs about the ends and means of education, a staggering number of public and private organizations seeking to exert influence, a focus on rigor and equity, and competitive pressures driven by parental choice and scarce resources. For MTOs, this amounts to expectations that they increase scale, rigor, and equity within contexts that are pluralistic, competitive, and often under-resourced.

Taken together, these literatures suggest that the ability of MTOs to operate as learning organizations is dependent on a combination of environmental forces and internal organizational capabilities. This interdependent relationship between environments and organizations is depicted in Figure A.



In this chapter, we apply these ideas to three case studies of middle-tier organizations, two in the US and one in the UK. Our aim is to explore how these MTOs develop and enact systems for creating, sharing, and using knowledge within and between schools, and the way in which their meso- and macro-level environments facilitate and complicate this work.

Evolving Environments in the US and England

`Changes in the policy environment over the last 25 years have dramatically altered the educational landscape in both the US and England. Traditional systems of local control have been disrupted by a combination of muscular accountability regimes and market-oriented efforts to increase parent choice and competitive pressure. In both countries, the impact of these changes have been far reaching for individual schools and the MTOs that oversee and support them.

One important change in both countries is the emergence of a more diversified provider landscape that includes an eclectic array of organizations that design and deliver educational services. In the US, the monopoly of the *One Best System* has given way to a combination of charter management organizations, comprehensive school reforms, school support organizations, school improvement networks, state-run districts, and more. Moreover, the local education authorities that still run the vast majority of US schools may be evolving into more tightly coupled organizations that manage teaching and learning with greater attentiveness and purpose (Rowan, 2007).

The English system has undergone even more dramatic changes. The 152 Local Authorities (LAs) historically charged with overseeing England's 21,000 schools have seen their capacity and influence reduced through a combination of budget cuts and a rapid expansion of academies and multi-academy trusts (MATs). Academies-- the rough equivalent of the US charter sector-- currently operate a third of all primary schools (35%) and more than three

quarters of all secondary schools (77%). As non-profit organizations funded and overseen by the national government, academies are not bound by the LA policies that traditionally shaped practices in areas such as student admissions and expulsions, curriculum, hiring, and instruction. In what has become a highly fragmented landscape, a single English locality is now likely to include multiple MATs, stand-alone academies, and traditional LA-operated schools.

Moreover, in both countries contemporary policies press for a combination of intellectual rigor and equity once thought to be in tension with each other if not mutually exclusive. In the US, the vast majority of states have either adopted the Common Core State Standards or similarly ambitious college-and-career-ready standards, while federal policy presses states and districts to improve the performance of traditionally under-served populations.

In England, national exams, together with school inspections undertaken by the Office for Standards in Education (Ofsted), exert considerable influence on decision-making and practice at multiple levels of the system. Ofsted inspectors evaluate all schools and academies against official criteria that encompass school leadership, curriculum coherence, teaching quality, student behavior and safety, and national tests and exams. Inspection results not only have consequences for individual schools, but also send important messages to parents and staff, thereby influencing school choice mechanisms and socio-economic stratification between schools (Greany and Higham, 2018). Poor performance can also lead to the dismissal of the head teacher and takeover of the school by a MAT.

Finally, in both the US and England, market-oriented policies have further increased pressure on school and system leaders. In England, national policies not only encourage schools to compete for students and teachers, but also to engage in transactional relationships with other schools through which improvement strategies are commodified and sold in a quasi-market for

improvement-related resources. In this environment, Ofsted evaluations not only provide feedback to school professionals, but signal the market value of a school or an entire network. In the US, the spread of policies promoting parent choice and the growth of the charter sector, has led to an environment in which schools compete for economic resources, students, teachers, and social legitimacy.

Research Questions and Chapter Structure

A puzzle emerges when looking across both countries. A new group of organizations increasingly populates the middle-tier sector, many of which differ in design and strategy from the typical districts and LAs that have historically operated US and English schools. These new organizations point to the potential for knowledge management and organizational learning that, in turn, raise new possibilities for more equitable and continuously improving systems. Yet these organizations are taking shape in broader environments comprised of a mixture of results-oriented regulation and market forces that engender competition for economic and social resources. All this leads to two questions taken up in the remainder of this chapter:

- How are middle tier organizations developing, sharing, and using practical knowledge in the US and England?
- How are processes for knowledge use and organizational learning shaped by educational environments?

Below, we draw on research of three of the authors to present cases from Memphis, England, and New York City that collectively demonstrate how middle-tier organizations create and use knowledge, and the way in which those processes are shaped by the incentives and resources residing in variable environments. In structuring these cases we adopt the five dimensions derived from the organizational learning literature outlined above. This framework aids comparison and helps to illuminate the different ways in which the three MTOs generate and

apply practical knowledge, though in doing so, may over-simplifying the complexity and diversity of the cases.

Case studies

The Shelby County iZone: From Autonomy to Interdependence[ii]

In January, 2010, the Tennessee legislature passed the First to the Top Act, a signature piece of legislation that redefined the state's approach to educational improvement. The new law adopted the Common Core State Standards in math and English Language Arts (ELA), embraced value-added measures in teacher evaluation, and increased the state's authority to intervene in local education matters. The law also authorized the State to identify the bottom 5% of schools based on student performance and to officially designate them as "priority schools" subject to a variety of interventions. The vast majority of priority schools were located in Shelby County, reflecting the large concentration of poverty in Memphis, the county's largest city.

Shelby County is Tennessee's largest public school district and is among the 25 largest public school districts in the United States, serving over 100,000 students in more than 200 schools. Close to 60% of students are eligible for free or reduced lunch, though that number is far higher for schools located in Memphis.

Of the more than sixty priority schools identified in Shelby County, a little less than half were assigned to the newly formed Achievement School District (ASD).[iii] The ASD represented a novel governance arrangement that involved a combination of state takeover and the entry of charter management organizations (CMOs) into the school turnaround arena. Many local residents resented the ASD's muscular approach and championed the iZone as a homegrown alternative to turnaround. Due to the ASD's limited capacity and Tennessee's tradition of local control, the Tennessee Department of Education launched three "iZones" in different regions of

the state. These iZones operated as "subsystems" within the larger district to which they belonged. An iZone was under the authority of the local school board and run by district personnel, but as a special enclave, it was granted an unusual degree of autonomy from district regulations, and enjoyed additional resources, including an extra-hour of the school day. The theory was that cordoning off a subset of schools from the larger district, combined with enhanced resources and autonomy, would lead to rapid improvements. Of the state's three iZones, the Shelby County iZone quickly became the most celebrated, starting with only 6 elementary schools, but eventually growing to include 23 of the most underperforming elementary, middle, and high schools in Memphis.

The Demands of Rigor, Competition and Scale Lead a System-Level Infrastructure

When the iZone emerged in 2012, district leaders adopted a strategy that was aligned with its relatively small scale and the state's basic skills-oriented standards. iZone leaders recruited the district's most accomplished principals and provided them with the latitude to hire their own teachers, and determine curriculum, pedagogy, and other school-level processes. Recruitment was aided by a hefty financial bonus to principals and teachers who transitioned to the iZone. During these early years, the iZone's student learning outcomes significantly outpaced the ASD, to the delight of district officials and the local community.[iv] The success enhanced the iZone's legitimacy and political clout as state officials and education leaders from around the country took notice.

Success bred pressure to grow, and by 2015 the iZone had expanded to 23 schools. Around that time, Tennessee completed its transition to a far more rigorous set of performance standards. The combination of increased scale and rigor-- factors also prevalent in the subsequent cases-- rendered the autonomy-based strategy largely ineffective and unsustainable; there were

simply not enough principals and teachers capable of performing extraordinary acts of leadership and instruction to support improvement at a wider scale. Moreover, even the most accomplished among them were unaccustomed to the type of instruction and leadership demanded by the new standards. Added to that, the threat of takeover from the ASD left leaders little margin for error. Simply put, the increase in scale, the new standards, and the looming presence of the ASD turned building-level autonomy-- a central pillar of the original strategy-- into a liability. One iZone leader offered a blunt assessment: "If you give an inexperienced race car driver the fastest car...it's not going to end well. That's what we're doing with these new iZone principals."

Designing a learning system

Forced to abandon a strategy that relied on individual school leaders to single-handedly transform their schools into high-performing, learning organizations, the iZone established a system that was rooted in *system-level* learning, continuous improvement, and capacity building. The new approach sought not just to increase the knowledge and skill of practitioners, but to embed that effort in a larger infrastructure that supported the generation of knowledge and evidence-informed adjustments. To varying extents, iZone leaders established key pillars of a learning system that encompassed 23 schools and an administrative hub.

Shared conceptual framework.

At the heart of the new strategy was a theory of teaching and learning that was rooted in three central tenets: (1) conceptually focused, ambitious math content; (2) a pedagogical approach rooted in rich classroom discourse and "productive struggle"; and (3) an equity orientation that emphasized grade-level instruction for all students. The instructional framework not only articulated a common approach to teaching and learning, but also established a cognitive framework that facilitated shared interpretation of data and experience. The successes,

struggles, and problems that bubbled up from classrooms could be understood and interpreted, collectively, through this framework.

Codified routines and tools.

The iZone's foundational ideas about instruction and leadership were codified in a set of routines, structures, and tools. The most important of these was the use of the Eureka Math curriculum and its associated lesson plans. The significance of the curriculum was threefold. First, Eureka embodied the iZone's vision for math instruction through its focus on conceptual understanding, productive struggle, and grade-level instruction. Second, the fact that Eureka would be shared among all K-9 teachers enabled the iZone to build a system in which teachers, leaders, and iZone officials worked collaboratively toward a common mission. Third, the curriculum signaled a clear purpose to the process of organizational learning in that improvement efforts were explicitly tied to the work of strengthening teachers' understanding and use of the curriculum in ways that led to better student learning outcomes.

Measurement tools

While the curriculum and lesson plans provided practical guidance to teachers, a classroom observation rubric and a series of interim assessments enabled school leaders, coaches, and iZone administrators to generate information on classroom instruction and student learning. Together with the shared theory of teaching and learning, the Instructional Protocol Guide (IPG) and the interim assessments constituted a common platform on which problems of practice could be identified, measured, and addressed. This measurement system also enabled objective comparison across classrooms and schools in ways that allowed for collective analysis across the iZone.

Boundary spanners

The iZone established teams of instructional and leadership coaches that supported teachers and leaders across the iZone. Beyond their support function, these groups *brokered* information and experience between individual schools and the larger iZone system. Instructional coaches observed teachers and leaders in their day to day work, employed the IPG to generate information about practice, communicated their observations to the iZone leadership, and brought advice and suggestions back to individual teachers. Leadership coaches engaged in a similar process. The coaching teams ensured that the experiences of iZone teachers and leaders supported learning and improvement across the entire iZone and not just among individual departments or schools.

Sensemaking structures

The rigor of the instructional system, the myriad challenges confronting teachers and leaders, and the sheer number of iZone schools complicated the work of interpreting the information flowing out of classrooms and schools. To manage this cognitive burden, the iZone established organizational structures that facilitated collective sense-making and shared interpretation of data. For example, each school established an instructional leadership team charged with interpreting classroom-level data and identifying school-wide trends and professional learning needs. Similarly, instructional and leadership coaches operated within larger teams that supported collective interpretation of data and experience to reflect on and enhance the efficacy of their work.

System-level Learning in a Pluralistic and Competitive Environment

The combination of a shared interpretive framework, common tools, boundary spanners, and sense making structures created an opportunity for the iZone to consistently assess progress, make evidence-based adjustments, and incrementally strengthen the overall system. Yet none of

these resources would implement themselves or inevitably lead to organizational learning. That would depend on the way that the hundreds of practitioners who comprised the iZone interpreted and used those resources. Moreover, the iZone operated within complex environments that shaped the way in which its diverse array of practitioners understood and enacted its vision.

Accountability and Takeover Threat Weaken Commitment to the iZone Model

The new design of the iZone created a strong potential for it to operate as a learning organization in a manner that has often eluded traditional districts. At the same time, the underlying ideas ran counter to the district's long history of direct instruction, test-prep, and practitioner autonomy. While some leaders and teachers embraced the iZone as a pathway to equitable instruction and outcomes, others bristled at the effort to uproot deeply entrenched norms and practices.

One particular source of conflict was the divergent interpretations of the state assessment. iZone leaders were adamant that building students' understanding of mathematical concepts would lead to improved outcomes on the state assessments. The iZone's leading math educator put it as follows:

> You could blitz (test-prep) all day long, but there's no way in the world you're going to put every type of question and every possible way that question could be placed in front of kids. However, if I teach you a deep understanding of it, I don't care which format or which question type you see on the test, you're going to persevere.

But for many teachers and leaders concerned about the prospect of ASD takeover, this approach seemed unrealistic and risky. Instead, they carefully aligned instructional practices to the format of the exam in an effort to ensure that students were familiar with the type of questions they would encounter on the test. Their focus on preparing students for the assessment

often came at the expense of the iZone's instructional priorities of grade-level, conceptually oriented instruction. One school principal was unapologetic in his defense of this practice: "A child may be able to do the work conceptually, but when they are tested a different way and the questions come up a different way, it's not that they can't do it, it's just a lack of exposure." His solution was to create a lesson that mimicked the format and style of the assessment. While this strategy may have boosted assessment outcomes, it represented a departure from the iZone's instructional philosophy and, in doing so, attenuated its capacity to function as a learning system. iZone leaders established a core infrastructure with remarkable speed, establishing structures, materials, and theories within just a couple years. However, cultivating the capacity of leaders and teachers to use the system effectively and to see it as a viable way to cope with a complex and challenging environment will be a longer process. The iZone case speaks to the combination of urgency and patience that system leaders, policy makers, and the public will need to exercise to realize ambitions for rigor and equity.

Case #2: Regional Multi-Academy Trust, England: Managing an 'identity crisis' through increased standardization[v]

Regional MAT operates 12 academies in low-income communities, half of which are in Eastern City and half across the wider region in Southeast England. With a population of around half a million, and above average levels of poverty and ethnic diversity, Eastern City poses significant challenges to the leaders of its 200 schools. The city's educational landscape, reflecting the changes described earlier, includes a mix of LA-maintained schools, academies operated by different MATs, and 'stand-alone' academies.

Regional MAT originated from a single, high-performing secondary school that had assumed responsibility for turning around two of the most low-performing schools in Eastern

City. The success of this initial partnership led to the creation of the MAT, with the principal of the founding school becoming its first CEO. Over the next six years the Trust grew to include 12 schools, almost all of which were under-performing and located in communities marked by high levels of poverty. However, the MAT's initial success in turning around a small number of schools stalled as it grew, leading to an 'identity crisis' and a set of changes in organizational structure and strategy. Though these changes came at a price, they also created new opportunities for knowledge use and learning in ways roughly akin to those of the iZone as it expanded beyond its initial set of schools.

Shifting Environments, Growing Scale, and a New Strategy

Growing from an informal 'school to school support' partnership among three schools into a Trust responsible for operating 12 schools posed several challenges for Regional MAT's leaders. One was that the new schools required rapid and intensive turn-around efforts, which stretched staff capacity and limited the scope for other strategic but less urgent changes. Second, several of the new schools were primaries, requiring new skills and knowledge that surpassed the experience and expertise of secondary-school teachers and leaders. Third, the MAT needed to develop new organizational capabilities with back office functions to support a staff of 1200 and a multi-million pound budget. Fourth, the new MAT was operating within a national and local policy and regulatory environment that was simultaneously evolving and, often, chaotic (Greany and Higham, 2018).

The early 'school to school support' work across the initial three schools was demanding, but at a small enough scale and with enough geographic proximity to effectively leverage informal relationships, trust, and a shared collaborative culture. A small close-knit leadership

team recruited from the three founding schools enabled organizational learning and coordination predominantly based on informal, face-to-face relationships.

Growth of the network quickly exposed a strategy that was ill-suited for a greater number and diversity of schools. One fundamental challenge was the notion that a successful school could seamlessly transfer its approach to an under-performing school absent a clear strategy for professional learning and capacity building. This assumption proved particularly problematic as the high-performing school served a more affluent community than the newly added schools. Second, the reliance on teachers from the founding school as the main source of support for the growing network led to a decline in performance in the founding school, which was downgraded by Ofsted from "Outstanding" to "Requires Improvement." These challenges forced the growing Trust to develop a new strategy for helping schools learn more effective ideas and practices, and that would enable the overall network to systematically learn and improve.

Building a Learning Organization for a Larger Network

A first step was to strengthen the capacity of the central team to coordinate improvement and knowledge-building efforts. Two Executive Headteacher roles were created to oversee and support the work of individual academy principals. In addition, a "Teaching School Alliance" (TSA)[vi] was established to spearhead turnaround efforts in underperforming schools and to provide Trust-wide professional development programs and networks for teachers and leaders. Importantly, most of the actual capacity and expertise remained in schools and 'school to school support' remained the main vehicle for generating and sharing practice-knowledge across the trust. The TSA facilitated this by brokering links and seconding expert staff between schools where needed. However, rather than coming only from the founding school, this support capacity now came from all of the MAT's higher performing schools. In these ways, the MAT evolved its

improvement model based on three key elements: a culture of collaboration; 'school to school support' as a mechanism for sharing knowledge and supporting struggling schools; and coordination by the central TSA team and the two Executive Heads.

These changes transformed Regional MAT from a partnership of three schools into a larger and more formal organization. But while these changes lead to incremental improvements in student test scores, they were not seen as sufficiently transformational. Once again, Trust leaders were forced to re-evaluate their approach, deciding that they needed to move towards greater standardization. One MAT leader explained the shift:

> We know that some of the most successful trusts don't muck about with (school) autonomy… It's plan A, and that's what everybody does, and you can scoff and think what about creativity and innovation, but ultimately, it does make them very successful in some ways…[W]e're only going to do the things that really work, and ...we're only going to allow those people to do it because they have a track record of doing it.

As the strategy continued to evolve, Regional MAT assumed some of the organizational characteristics that positioned the iZone to function as a learning system capable of generating and using practical knowledge.

Shared Conceptual Framework

Whereas the iZone's strategy was to roll out a centrally-defined model for teaching, Regional MAT's approach was to incrementally build consensus around core principles and practices in each subject area. These efforts were facilitated by the existence of a National Curriculum and assessment framework and by Ofsted's school inspection rubrics, all of which helped to ensure shared language and understanding of teaching, learning and improvement. Whereas iZone leaders were forced to establish and communicate their own theory of instruction,

Regional MAT could rely, at least to some extent, on national standards that outlined core principles of instruction and leadership. Ofsted inspections remain controversial in England, but they also provide resources that American MTO leaders must devise on their own.

Codified routines and tools

While all English schools follow the national curriculum, individual schools can select their preferred exam board, with each board offering its own interpretation of the National Curriculum and its own exams. A key step towards standardization across the Trust was to insist that all schools adopt the same exam board in core subjects (e.g. maths, English), thereby ensuring that teachers in these subjects taught the same curriculum, with the same lesson resources and assessment frameworks. As with the iZone, common curricular tools contributed to a shared set of experiences for subject teachers that, in turn, enabled more meaningful collaboration and collegial learning.

Boundary Spanners

A series of boundary spanning structures were instrumental in Regional MAT's effort to establish a common technical culture. One example was the trust-wide subject network meetings, held six times each term for all staff in each subject area. These networks provided Trust-wide opportunities to co-design curriculum and lesson resources, which were then applied across all schools in the trust. The networks were facilitated by lead teachers, designated and trained by the TSA against national quality criteria. Another example was a system of school to school peer reviews (Godfrey, 2020), where each principal would identify an area of practice they wanted reviewed by a team of leaders drawn from other academies and the Trust central team. These leaders would then visit the school for a day, feeding back their findings and recommendations to the principal.

Measurement Tools

The single exam board and curriculum noted above allowed for MAT-wide 'mock' assessments to be taken by all students in key year groups. This generated performance data that could be used to provide additional resources to schools or departments identified as in need of support. Data from the shared assessment was complemented by additional evidence submitted by schools into a central repository and by evidence drawn from peer reviews and regular visits by the Executive Principals. Taken together, these multiple forms of data helped to generate a comprehensive picture of performance and capacity in each school, benchmark all schools, and identify schools or departments that needed more intensive intervention. The CEO explained: *"*We (can) now more actively compare (schools)… with a clearer focus on the data, but also the analysis and understanding what we're comparing."

Taken together, these structural changes enabled MAT leaders to generate and use information in ways that supported Trust-wide learning and improvement. As the CEO elaborated, the shared technical culture enabled leaders to make evidence-based judgements about how different resources and strategic decisions were contributing to performance.

> [W]e now have, as a trust, a really clear idea of the impact of our decisions on value added scores, and we're tracking that more closely. Because we're doing that together, we're comparing more closely, and it's allowed us to drill down far more effectively into those things that make that kind of difference.

Challenges to the Regional MAT Model

Similar to the iZone, the potential of Regional MAT's emergent infrastructure to generate and use knowledge was complicated by environmental challenges. In particular, sector-wide incoherence across Eastern City compromised the ability of Regional MAT's leaders to learn

from other providers and to develop collective solutions to shared challenges. On the one hand, the proximity of so many different MATs was a potential source of new ideas, and to some extent these ideas were shared. For example, according to Regional MAT's CEO there was 'healthy competition' between different trusts – "we'll compete up until the summer, and as soon as the (exam) results come out, it's now we share everything we know. It becomes a level playing field in terms of who's got the ideas." On the other hand, the rapid changes and fragmentation across the city made collaboration difficult. For example, Regional MAT's growth was regarded by many other schools, MATs, and TSAs as 'empire building' and as politically and commercially driven. In theory, all sides valued collaboration, but an environment defined by eclectic perspectives and competitive pressures derailed the effort.

English policy makers have acted under the assumption that a combination of competition and accountability will drive successful changes in the structure and effectiveness of MTOs. Higher performing schools have been incentivized to take over lower performing schools and scale up into MTOs, but with minimal support. National evaluations show that schools in these new MATs are, in general, performing no better than other schools, though small MATs are outperforming larger ones (Bernardinelli et al, 2018). Policy makers would be wise to consider how they could foster collaboration and learning so that the experiences of organizations like Regional MAT could inform the evolution of other MTOs coping with similar challenges.

Case 3: Upward Affinity Organization: from Personal Chef to Prix Fixe Meal[vii]

New York City is the largest district in the U.S. with over 1.1 million students in over 1,800 schools. Since New York state granted the city mayoral control in 2002, it has experimented with numerous strategies to support improvement in its diverse portfolio of

schools. The constantly shifting policy environment has created uncertainty for MTOs in the city, with sudden shifts in resources, incentives, and authority, forcing many MTOs to adapt their support strategies to survive in a tumultuous environment.

This analysis will focus on one MTO, Upward Affinity Organization, which has been helping to support the foundation and improvement of traditional public schools in NYC since the 1990s. Upward has founded and supported a network of roughly 20 traditional public schools in New York City, guided by a set of common principles:

- Schools are open to all students, unlike many NYC middle and high schools with admission requirements, and thus serve a high proportion of low-income students as well as students with special learning needs;
- Principal instructional leadership focused on college and career readiness;
- Data-driven, student-centered learning; and
- A goal of equipping all students with skills for success in the 21st century economy through a range of industry partnerships.

This case highlights how Upward's approach to supporting continuous improvement changed in response to shifting environmental pressures.

Shifting Environment, Decreased Resources, and a New Strategy

Like most MTOs in NYC, Upward operated under two different mayors with divergent theories of action for school improvement. Under the first administration, MTOs competed for schools in a market-based system of support organizations. MTOs were accountable to schools, which self-selected into MTO networks, rather than the district central office. Since Upward had been integral to the foundation of its schools, it benefited from high levels of trust and loyalty throughout its network, providing Upward with a consistent, modest-sized network.

Much like the organizational culture that characterized the early years of Regional MAT, Upward's staff described their work as "driven by relationships." The theory of action emphasized school self-determination, leading the network to organize its work around a shared set of beliefs, such as a commitment to network learning and college and career readiness, rather than a common curriculum, pedagogy, or other elements commonly associated with a more specified educational infrastructure. Leveraging its highly trained instructional support staff working across its modest number of schools, Upward operated as "*personal chefs,*" providing schools with highly tailored services and coaching. This approach rested on strong two-way communication between the hub and member schools, coupled with far ranging expertise among Upward's staff. In addition, Upward enjoyed access to robust resources, adding to their capacity to support individualized improvement strategies in each member school.

However, the second administration rejected the autonomy that had been granted MTOs under the prior mayor, recognizing that while some networks and schools thrived under a decentralized approach, others floundered without more central guidance and oversight. As one district leader shared:

> The beauty of [the system was the support networks] were customized, and some schools appreciated that. The downside was there was no consistency. Everybody did whatever the heck they wanted, and it was really hard to establish quality assurance.[viii]

In addition, Upward experienced substantial budget cuts, leading to a reduction in staff. At the same time, Upward's schools were increasingly asking for more curricular and instructional support to meet the demands of rigorous college-and-career ready standards. Finally, while Upward had previously contracted directly with its schools, the affinity

organization now contracted with the district central office for a three-year term contingent on the district's assessment of Upward's performance. As the organization's CEO shared, "They just threw money at us under Bloomberg....Now they really hold us accountable and assess whether we're adding value to the system." Thus, Upward found itself struggling to support the same number of schools to meet more rigorous standards with fewer hub resources, competing sources of guidance, and greater threats to its legitimacy. These radical changes in Upward's environment necessitated a more focused approach to network learning and improvement.

Refining Organizational Learning

Recognizing the need to more efficiently expend resources and communicate clear parameters by which the district should judge their performance, Upward shifted from a system of individualized guidance to a "*set menu*" of supports codified in more centralized educational infrastructure and discrete programs. Upward already had established structures that served as both boundary crossing and sense making functions, but the lack of shared tools and (and thus shared experience) attenuated the quality of professional discourse and learning. One staff member described how the introduction of a common formative assessment helped to ground collegial conversations:

> We were convening teacher leaders, but there was no 'there' there. We can talk about leadership, [...] and that's a great question and it's really nice to have colleagues to talk with, but (now) you could talk about leadership in the context of and this formative assessment that ... is more challenging than the one we gave last year, so how do I support the teachers' learning around that. That's actually richer as a conversation.

Thus, rather than build new organizational structures that support collaboration and professional learning, Upward leveraged and focused their existing mechanisms around a newly

constructed improvement framework that intended to support deeper learning and a more coherent improvement process.

Shared Conceptual Framework

Unlike the iZone's framework, which was centrally created, and Regional MAT's, which was facilitated by national standards, Upward's new framework for their work was co-constructed by a Strategic Planning Committee that included Upward staff, board members, and network principals. Upward's new approach centered on "*five pillar*s": academics, leadership, socio-emotional learning, college readiness, and career readiness. These pillars were essential to focusing Upward's improvement goals and associated programmatic supports. Rather than trying to respond to the idiosyncratic needs of the roughly 20 network schools, hub staff engaged in annual, collaborative goal-setting conversations with school principals, using the pillars as "a framework" to identify areas of need and "determine which kinds of supports would be appropriate in each school."

Codified Routines and Tools

Within each of the above pillars, Upward began to codify its program offerings to allow for more strategic scale up across its network. Rather than support schools' efforts to select or design curriculum and other instructional resources, Upward began to work with schools to support the interpretation and use of a more codified central instructional infrastructure. In some subject areas, such as literature, Upward leveraged existing school-level capacity by collecting and spreading best practices network-wide, whereas in other areas, Upward established its own tools and materials:

> We are increasingly codifying the way we deliver supports into discrete programs with clear goals, inputs, expected outcomes, and structures...We used to have a math coach,

> and if your school wanted to sign up for coaching, [the coach] would go [to the school]...Today if you want support in math...you do our Algebra program. You commit to using the curricular resources and the unit plans that we are building. We've codified more, so that we can then measure, and then replicate and scale.

Upward coupled these codified curricular and instructional tools with existing networked routines, such as instructional rounds, principal meetings, and support and development for teacher leaders, thus combining a clearer instructional vision with strong practices for improving practice.

Measurement Tools

Upward had always focused on measuring outcomes in their schools, such as student test scores, graduation rates, and college-going and college-persistence rates. However, with the shift to more codified programs, Upward grew increasingly focused on measuring their inputs, or measuring the impact of their specific programs within schools through common assessments. They further leveraged existing coaching visits to gather school-level data about implementation. While this approach clashed with previous norms of school autonomy, Upward staff recognized that without fidelity of implementation of their new programs, at least at the outset, it would be difficult to untangle the value of their inputs and make necessary adjustments. These processes and their concomitant social dynamics bear striking resemblance to the experiences of the iZone and Regional MAT.

Boundary Spanners

Like Regional MAT, Upward leveraged existing boundary spanning structures to support their learning during this transition. For example, their Principal Advisory Group provided information about what was working, where schools were struggling, and how the network could

continue to improve. Upward staff described this as key to maintaining buy-in and shared understanding of network goals, sharing, "We do not come to [the Principal Advisory Group] and say we are doing X...We come to them to say this is how we are thinking about this. We are seeking their advice because fundamentally they are the constituency we are most accountable to." In addition, the majority of Upward staff were primarily in school-facing roles and spent substantial time working with staff in schools. This enabled them to support programming on the ground and gather additional school-level data to inform the hub's approach.

Sensemaking Structures

Upward leveraged existing organizational structures to support sensemaking at the organizational and network levels. Within the organization, Upward staff participated in regular cross-functional meetings to discuss their experiences with network schools, troubleshoot common problems, and ensure schools were receiving coherent messaging and support from across the hub's numerous programmatic teams. In addition, Upward held semi-annual meetings with school leaders to discuss school data and co-plan appropriate school supports based on their collective interpretation of schools' strengths and organizational. These structures, now infused with more robust data and enabled by a clear conceptual framework, enabled Upward staff and school personnel to engage in a continuous process of organizational learning and improvement.

Systemic Incoherence Threatened Internal Network Coherence

Despite Upward's considerable efforts to craft a more coherent, focused learning network, their internal improvement efforts were further influenced by the incoherence they and their schools experienced within the broader New York City district. While under the previous administration Upward was the only official source of guidance and support, schools were now expected to work with Upward only around instruction, with a district "field support center"

handling operational issues, and a district superintendent supporting school leadership and accountability compliance. The emergence of the central office as a prominent source of guidance increased the layers of bureaucracy around and muddled the messaging aimed at Upward's schools.

Indeed, some Upward leaders believed conflicting guidance from the central office threatened to undermine schools' commitment to and participation in Upward professional learning opportunities. Network staff described how attendance at principal meetings was down from what the network had previously experienced, raising concerns within the network.

> Our principals are pulled in more directions now...They get called out [of their building to superintendent meetings] at different times. People get called out too many times in a month, and it's harder for our principals to maintain this commitment [to Upward].

Despite efforts to operate alongside the district in service of common goals, their relationship under the new administration was more transactional and tenuous. The effort to establish an internally coherent network based on a shared set of materials and practices was often challenged by the conflicting guidance and overlapping allegiances of an incoherent middle tier.

As with the iZone and Eastern MAT, the relationship between Upward's environment and organizational structure is complex. One the one hand, shifting accountability mechanisms, increasingly rigorous standards, and budget cuts forced Upward to develop a more internally coherent strategy and corresponding infrastructure for network improvement. At the same time, an increasingly crowded, contested, and interconnected middle-tier thwarted the coherence of the network. Upward's case leaves us with an open question: Can MTOs successfully build coherent

support for the schools within their individual subsystems while simultaneously collaborating with and coordinating their approach across the broader MTO environment?

Conclusion

In concluding this chapter, we reiterate our contention that the capacity of middle-tier organizations to design systems capable of generating and mobilizing practical knowledge across networks of schools is at the heart of the larger equity agenda that is central to this volume. Strict accountability, a competitive environment, and other forms of pressure will amount to little if they do not foster dramatic changes in professional knowledge and expertise. As others have argued, "it takes capacity to build capacity" (Hatch, 2009, p. 13). MTOs are a promising means of supporting improvement and thus increasing capacity across a system of schools rather than leaving schools with varying internal capacity to wrestle with common problems of practice in isolation--an approach that has proven to result in inequitable outcomes time and again (Bryk et al., 2010; Johnson et al., 2015; Payne, 2017).

In the cases presented above, environmental demands for increased rigor, equity, and scale have led MTOs to move away from approaches favoring school autonomy and individualized supports to strategies rooted in shared theories, common tools, and a unified professional language across schools within their networks. Indeed, despite their differing social and political contexts, each MTO established an infrastructure that distributed the work of improvement across a network of schools and a hub organization, and in doing so, established a shared technical culture that sat at the heart of their improvement strategy.

The establishment of a shared technical culture is also central to the ability of educational organizations to generate and use knowledge. Traditional districts, LAs, and other organizations that operate schools have long produced enormous quantities of data about teaching and learning,

but often lacked the structures and tools to use those data to inform system-wide improvement. One way, then, to understand the changes undertaken by our three MTOs is that each was attempting to establish or further refine the organizational and cognitive conditions that would enable them to leverage experience in ways that could drive systematic improvement.

That MTOs will develop the capabilities needed for learning and improving is not inevitable. The cases discussed here show how the transition to a more tightly coupled network model is pressing MTOs to develop capabilities for which past experience is of limited relevance, and for which the larger environment offers inconsistent support. Just as leaders of Regional MAT discovered that running a successful school did not fully prepare them to lead a network of schools, many iZone leaders realized that they had little experience designing and managing complex systems of professional guidance for teachers and principals across schools. Upward's bespoke strategy provided insufficient value in informing their transition to a standardized system. The cases depict MTOs in a period of transition in which past systems are undergoing reconsideration, and new structures, routines, and capabilities are under construction.

The pressure on MTOs to develop new capacities brings the issue of their learning into stark relief. It is no small irony that while individual MTOs are designing structures to support collaborative learning across schools, there are not commensurate learning opportunities for MTO leadership. Just as the three MTOs concluded that it was inefficient and unsustainable to expect every school to chart its own improvement trajectory, it is equally inefficient and, ultimately, inequitable for every MTO to grapple with similar challenges in their own silos. MTO leaders are vulnerable to the very isolation, inconsistency, and inequities from which they seek to liberate schools. This is particularly the case in contexts, such as England, where multiple MTOs are competing against each other for access to resources and legitimacy. Absent deliberate

guidance and support, some will succeed, while others, along with the students they serve, will be left behind. Policy makers and funders would be wise to directly address and support MTO learning.

MTO learning is further impeded by a lack of sector-wide coherence. Environmental pressures are simultaneously leading to greater coherence *within* MTOs and greater incoherence *among* them. In Memphis, changes to the structure of the iZone greatly strengthened its internal coherence, but a striking level of incoherence plagued the larger region with its remarkably pluralistic and fractured provider landscape. In New York, Upward took significant steps to provide a more coordinated and common approach to its work with schools, but struggled to align its support with that of the district. Regional MAT sought to partner with other MTOs but was frustrated by a competitive environment and divergent educational philosophies. While we are encouraged by MTOs' transition toward more coherent systems, we worry that a fragmented, segregated environment in which MTOs operate small, independent enterprises will stymie the larger effort to design a more equitable and rigorous education system.

Finally, questions of legitimacy and accountability cut across these cases. How can MTOs maintain legitimacy given the incremental and uncertain nature of their work? The New York and English cases offer some clues. In both cases, the focus on outcomes was at least partially offset by accountability systems that attended to school-level processes. The Ofsted inspections grade schools based on leadership practices, instruction, and internal coherence, as well as tested outcomes. The New York City Department of Education evaluates affinity organizations based on teacher learning and school satisfaction, as well as student learning outcomes. The more that accountability regimes balance outcomes and processes, the more that MTOs can build legitimacy as they learn to be more impactful and effective organizations. This

may also encourage MTOs to eschew practices that artificially inflate scores without contributing meaningfully to student learning.

Finally, writing during what we hope to be the final throes of the COVID-19 pandemic, we are compelled to add that the challenges that individual schools and MTOs will face in the coming years will likely surpass those discussed here. Variation in the quality of schooling students have experienced over the last year, as large it was prior to the pandemic, is likely to be even greater. Schools and systems will be better positioned to address these challenges through common solutions devised through collaborative learning and improvement processes. Now, more than ever, we see a need for strategies that promote interdependence--both within and among MTOs--to support systemic learning and improvement in a post-COVID world.

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[i] While there are many different educational organizations, including schools and state agencies, this chapter focuses predominantly on middle-tier organizations.

[ii] The iZone case is based on a three-year study of its design and implementation. See Glazer, Massell, Lenhoff, Larbi-Cherif, Egan, Taylor, Ison, Deleveaux, and Millington, 2020.

[iii] For additional information on the ASD, see Glazer, Massell, & Malone, 2018; and Glazer & Egan, 2019.

[iv] For analysis of iZone and ASD outcomes, see Zimmer, Henry, Kho, & Viano, 2015.

[v] The Regional MAT and Eastern City case study is drawn from a larger research project. For details on methods and findings, see Greany and Higham, 2018 and Greany, 2020.
[vi] A TSA is a designated school that receives additional government funding to support other schools, particularly those identified as in need of improvement.
[vii] This case is based on a larger study that examined MTOs in New York City led by Priscilla Wohlstetter and Diane Massell with support from Megan Duff, Angela Gargaro Lyle, and Clare Buckley Flack. For further details on methods and findings, see: Duff, Flack, Lyle, Massell, Wohlstetter, 2019.
[viii] See Wohlstetter, Houston, & Buck (2014) and Wohlstetter, Buck, Houston, & Smith (2016) for more on the network structure and equity implications of the Bloomberg theory of action.