

Learning to Lead School Districts Effectively:

A Literature Review

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Table of Contents	page
Introduction	3
Section I. Effective Districts and Learning to Lead Effectively	5
Districts and School Improvement. Why Bother?	5
Effective Leadership in Medium and Small Districts	10
Learning to Lead Effectively: The Link Between Knowledge and Improvement	13
Section II. The What and How of Effective District Leadership	16
Prioritize Improvement of Teaching and Learning	16
Clear Vision and Ambitious Goals for Teaching and Learning	
Theory of Action to Link District Strategies with Improved Teaching and Learning	16
Building Coherence Around Vision and Goals	17
Building Capacity Through Support and Accountability	18
Attracting, Supporting, and Retraining the Best Teachers and Leaders	20
Developing Capacity for Leadership at School and District Levels	20
Building Capacity to Collaborate Effectively	21
Sustain an Open and Collaborative Culture	24
Modeling and Cultivating Trust and Reciprocal Accountability	26
Developing Effective Collaboration and Shared Leadership	26
Vertically	26
Connecting and Collaborating Laterally and Upward	30
Promote Systemwide Learning	33

Supporting and Modeling Learning and Collaboration	33
Continuously Testing and Refining a Theory of Action	35
Using Evidence for Reciprocal Accountability and Improvement	36
Section III. Principles of Learning	41
Leverage and Spark Intrinsic Motivation	42
Grant Exposure to Masterful Leadership Practice	43
Facilitate Continuous Practice	43
Practice and Promote Feedback	44
Stimulate Reflection	45
Enable Peer Learning	45
Bringing It All Together	46
References	47

Abstract

This literature review describes *what* effective district leaders do to influence the improvement of teaching and learning systemwide, *how* they do it, and proposes *how others might learn* to lead districts more effectively. The *what* and *how* of effective district leadership are organized in four systems' leadership practices (Prioritize Teaching and Learning; Build Capacity through Support and Accountability, Cultivate an Open and Collaborative Culture; and Promote Systemwide Learning) and twelve principles of action (three for each practice). The review also proposes six principles of learning that can orient the design of professional learning opportunities for district leaders to learn to lead more effectively. These learning principles are i) Leverage and Spark Intrinsic Motivation; ii) Grant Exposure to Masterful Leadership Practice; iii) Facilitate Continuous Practice; iv) Promote Feedback; v) Stimulate Reflection; vi) Enable Peer Learning.

Introduction

The following literature review was conducted to inform the design of practice profiles and a professional development program for school district administrators and professional staff (collectively referred as 'district leaders' in this review) in Ohio. It seeks to support the state's efforts to build the capacity of district leaders for inclusive instructional leadership in schools and across their districts (SDI, 2019). Given this ultimate purpose, we not only describe *what* effective district leaders do to influence the improvement of teaching and learning systemwide but also *how* they do it and *how others might learn* to lead districts more effectively.

The review is organized into three sections. We start with an introductory section that discusses why it is important to generate knowledge about the characteristics and leadership of effective school districts at the central office level. The second section discusses the *what* and *how* of effective district leadership, using as a guiding structure the four system practices of Ohio's *Moving Your Numbers: Prioritizing the Improvement of Teaching and Learning; Building Capacity through Support and Accountability; Sustaining an Open and Collaborative Culture; and Promoting Systemwide Learning*. Our review builds on research findings and insights communicated in key documents

previously produced and disseminated by the Ohio Department of Education (ODE) and the University of Cincinnati Systems Development & Improvement Center (UC-SDI):¹ including *Moving Your Numbers: Key Practices Guide*, resource materials from the *Ohio Leadership for Inclusion, Implementation, and Instructional Improvement (OLi-4)* program, *Ohio's Leadership Development Framework*, *Ohio's Statewide System of Support: Foundations Document* and *Systemic Improvement Practices Review District Discussion Guide*. While some of these materials emphasize leadership and improvement at the school level (e.g., OLi-4), others offer guidance for system improvement at multiple levels: state, district, and school levels (e.g., *Ohio's Leadership Development Framework*; *Moving Your Numbers*). The practices specified in all of these documents are well supported by relevant research literature on educational leadership, and it would be redundant to simply replicate what has been summarized and reported before. While there is a necessary overlap between these Ohio documents and our review, our focus is primarily on improvement-oriented leadership characteristics and actions at the central office (school district) level. We have incorporated recent research literature in the review and drawn upon our own research and work on district leadership and school improvement. We also sought to orient discussion about district leadership with evolving trends in education and its context in mind (e.g., broader goals for student learning and accountability, changing conditions for school district

¹ National Center on Educational Outcomes. *Moving Your Numbers Website*. <http://www.movingyournumbers.org/> Ohio Leadership for Inclusion, Implementation, and Instructional Improvement, OLi-4 (2016). Curriculum Framework. Ohio Department of Education. Ohio State Development Team (2019) *Foundations Document*. Draft 2.0. *Resetting the Foundation of Ohio's Statewide System of Support*. By the Systems Development and Improvement Center: OLi-4 Inclusive Leadership Practices; OLi-4 Non-Negotiables. Handout; OLi-4 Performance Coaching Practices. Rubrics; Systemic Improvement Practices Review (SIPR). *District Discussion Guide: Practice Profile*; OLi-4-SIPR Overlap. Graphic; OLi-4. Trifold flyer; OLi-4 Website. <https://www.oli-4.org/>

governance and support, changes in the delivery of education services arising from the COVID-19 crisis).

The explicit charge given for the development of this literature review was to identify from extant literature and authoritative opinion the essential actions districts need to take to transform central office functions in order to promote system-wide learning, prioritize teaching and learning, build capacity through support and accountability, and create open collaborative cultures that facilitate continuous learning on the part of adults at all levels of the district.

In our view, the four OLi-4 district practices associated with the Ohio Improvement Process (OIP as described in the documents referenced above) are comprehensive and cover the key realms of action of effective districts.² We believe that the ideas, tools, and prototypes derived from the present literature review are more likely to be understood and taken on by district leaders in Ohio the more they adopt and adapt to existing frameworks in the state. For this reason, we use these four system practices as key categories to frame and characterize effective school district leadership. In describing each of the four practices, we have endeavored to describe general principles of action underlying the leadership practice of effective district leaders that are applicable regardless of variability in district size and contexts. We believe these principles of action

The four district practices operationalized through use of the OIP, for example, encompass all 10 practices/characteristics associated with high performance in a summary of 31 studies of district effectiveness (Leithwood, 2010).

Prioritizing Teaching and Learning encompasses: districtwide focus and vision for student achievement (practice #1); clearly established and aligned curriculum and instruction (practice #2);

Building Capacity through Support and Accountability encompasses: investing in instructional leadership (practice #6); job-embedded professional learning for leaders and teachers (practice #8); infrastructure alignment (practice #10).

Cultivating an Open and Collaborative Culture encompasses: a districtwide sense of efficacy (practice #4); building and maintaining good communications and relationships (practice #5).

Systemwide Learning encompasses: use of evidence for decision-making (practice #3); a targeted and phased orientation to school improvement (practice #7); strategic engagement with the government's agenda for change and associated resources (practice #9).

are helpful to understand and differentiate between adequate and outstanding district leadership – a distinction that helps create developmental rubrics for district leaders.

The third section, Principles of Learning, discusses how district leaders might learn to lead more effectively. That is, how and under what conditions they are more likely to fully embrace the four inclusive district leadership practices operationalized through the use of the OIP and leverage them to more effectively lead improvement in schools and across the system. It draws from three sources of knowledge: existing knowledge on effective professional learning for district leaders, the more extensive body of work around effective professional learning for teachers and school leaders, and broader theoretical understandings of how and why adults learn. It is organized around the following six principles of learning: i) Leverage and Spark Intrinsic Motivation; ii) Grant Exposure to Masterful Leadership Practice; iii) Facilitate Continuous Practice; iv) Promote Feedback; v) Stimulate Reflection; vi) Enable Peer Learning.

Section I. Effective Districts and Learning to Lead Effectively

This section is organized into three parts. The first part discusses why learning from and about effective districts matters. The second part addresses effective leadership in large, medium, and small districts. The third section proposes that in order to translate existing knowledge on effective districts into better district leadership practice it is crucial to give deliberate attention to how district leaders do or can learn to lead more effectively.

Districts and School Improvement. Why bother?

Why pay attention to the role and influence of school districts on school leadership and school quality and improvement? Some large-scale studies of school districts and their effects on teaching and learning report little evidence that districts make much difference in the quality of education at the local level. These studies also reveal little significant variability across districts (Floden et al., 1988; Tymms et al., 2008). Others report that district-wide interventions, such as professional development for principals, do not yield evidence overall of improvement in targeted focuses for change (Leithwood et al., 2019). From such studies, one might conclude that while school districts serve useful administrative functions in a school system, what they do is of little consequence for the quality of education at the school level.

While this might be generally true for many school districts and comparable local education agencies in North America and internationally, there is also a substantial body of research that identifies school districts where student academic results are significantly better or improving on a widespread basis when compared with other districts serving similar communities. This research investigates what education leaders

and staff in those districts are doing that seems to account for their success (e.g., Murphy & Hallinger, 1988; Bedard & Mambourquette, 2014; Brandon et al., 2015; Burns et al., 2019; Cawelti & Protheroe, 2001; Hightower et al., 2002; Fullan et al., 2016; Johnson et al., 2015; Knudson, 2013; Leithwood, 2010; Leithwood & McCullough, 2017; Roza & Heyward, 2015; Togneri & Anderson, 2003; Zavadsky, 2009, 2016), often using qualitative research methods (e.g., interviews, observation, case studies). The effects of these “outlier” districts tend to disappear statistically in large-scale studies that examine the effectiveness and influence of school districts more generally, such as the ones cited above. Thus, ***one reason to pay attention to what leaders and staff in school districts do is that some districts are more successful than others in supporting positive levels of student performance for all schools and students in their systems.*** This is the same logic applied to comparative investigations of more and less effective schools (Trujillo, 2013).

A second reason to pay attention to school district leadership is that districts vary in their approaches to support school improvement. A key difference centers on the extent to which the district and its leaders emphasize centralization versus decentralization in expectations, goals for improvement, financial management, and the professional practices of principals and teachers. In a set of case studies of six high performing urban districts, for example, Johnson et al. (2015) illustrated how system-wide coherence, one of the key characteristics of effective districts, can be achieved through both highly centralized (e.g., Aldine Independent School District, Texas; Long Beach, California) and highly decentralized (e.g., Baltimore City, Charlotte-Mecklenburg, NC) leadership and system support to schools, while adhering to district commitments to common standards for student learning and professional practice. Massell and Goertz (2002) also presented contrasting examples of both centralized and

decentralized district improvement strategies. Louis (1989) described four district-level approaches to change: implementation strategy (uniform procedures, uniform results), evolutionary planning (uniform procedures, non-uniform results), goal-based accountability (non-uniform procedures, uniform results), and professional investment or capacity building (non-uniform procedures, non-uniform results). The practical reality is more likely a mix. While the logic of contemporary educational standards and accountability policies tilts the balance towards a goal-based accountability strategy, this approach often occurs in combination with the other strategies that emphasize the adoption of 'best practices' (implementation strategy), use of iterative collaborative inquiry processes (evolutionary planning), and development of instructional leadership (capacity building).

Spillane (2002) investigated how district leaders in nine different Michigan districts responded to proposals and policies for reform in mathematics curriculum and teaching. He reported variations in district strategies for teacher development associated with differences in district leaders' conceptions of how teachers learn (e.g., behaviorist perspective, constructivist perspective). In sum, district leaders espouse different theories of action about how to organize and enact district direction and support for system-wide quality and equity in school results. While researchers identify some common characteristics in how they do this, they also describe different routes to achieving system-wide goals for student and school performance. District leaders aspiring to improve district performance are wise to consider the alternatives in light of variations in district resource capacity, local professional beliefs, and external policy contexts.

Some research focuses less on the impact of school district policies and practices on student learning outcomes than on the influence of school district level

agents and actions on the interpretation and implementation of state and federal education policies. Findings from this research demonstrate that school district leaders vary in their orientation to and interpretation of external policy mandates. Some define their roles and responsibilities in terms of compliance and implementation of external education policies, while others choose to leverage and influence external policies to support more locally defined priorities and goals for improving the quality of schools (Ainscow & Hargreaves, 2010; Hargreaves & Braun, 2012; Hargreaves & Shirley, 2020; Seashore Louis et al., 2011). Research by Spillane illuminates how district office personnel mediate local interpretation and implementation of state teaching and learning policies. Furthermore, the mediation role of districts is not straightforward because it is embedded in a political context that can be complicated and contentious. Competing interests between professional factions may even vie for attention and resources within the same district (Spillane 1996, 1998, 2002). Thus, ***another reason to pay attention to school districts is that district-level agents and actions influence the interpretation and the implementation of system goals and policies for education.***

Some arguments for addressing the school district's role in school improvement are partially contingent on district size (i.e., number of students and schools) and professional capacity (i.e., number and composition of central office positions, funding for professional support). The argument that ***districts are well situated in the education system to scale up and support multi-school interventions aimed at improving the quality of schools*** (Elmore, 1996), for example, is more applicable to districts that serve more than one or two elementary schools, a middle school, and a high school. We consider the district size and professional capacity in further depth in the next section of this report. One of the key distinguishing characteristics of medium to large effective school districts is their ***ability to create coherence in programming,***

professional practice, and improvement efforts across the system (Anderson et al., 2012; Fullan & Gallagher, 2020; Johnson et al., 2015).

School improvement researchers have long noted that district-level leaders and professional staff often act as essential links on behalf of school personnel to external knowledge bases (academic research, practices in other jurisdictions) (Cuban, 1984; Fullan, 2020; Hyle et al., 2010; Spillane & Thompson, 1997) and to internal data about the performance and characteristics of different schools. They can facilitate awareness of promising practices across schools in their jurisdictions (Anderson et al., 2011; Anderson et al., 2010). Research on professional and school improvement networks through which educators share knowledge about promising practices and collaborate to search for solutions to common problems also emphasizes the district's role in creating and supporting networks (Leithwood & Azah, 2016; Wohlstetter et al., 2008). Whether the emphasis is on networking within the district or outside the district depends in part on the district size. In sum, ***school districts are well situated to facilitate the identification and diffusion of promising practices between schools within and between their local jurisdictions.***

A persistent challenge in implementing instructionally-related innovations in education is whether changes that are introduced, whether at the classroom, school, or system levels persist or are abandoned in favor of existing practices or even other innovations that come along. Change theorists used to refer to this as the institutionalization of change, i.e., the transformation of changes into routine continuing practice (Fullan, 1982; Berman & McLaughlin, 1976; Cuban, 1992). This is now commonly talked about as the sustainability of reform or change in education. The threats to sustainability are many—failure to implement innovations in programs and practices long enough for implementers to develop sufficient skill in their use to fairly

assess their impact on student learning and professional practice; failure to provide effective and sufficient professional support to implementers to help them overcome the so-called 'implementation dip' during which personal and collective efficacy diminishes while implementers are learning to do the new thing and do it well; failure to ensure the continuation of any special funding or resources necessary to support ongoing implementation; turnover of school and system leaders who were early champions of the change; failure to effectively induct newly hired teachers and other implementers into the use of the expected programs and practices; failure to adapt the new practices to changes in context. Given their control over local policies and resources, ***school districts have greater capacity than individual schools to address the challenges of sustaining productive educational practices and results.*** Again, this depends in part on district size and professional capacity.

Central government education agencies do not have the professional capacity (human resources, time) to respond intensively to the particular needs of every school, while individual schools do not have equal capacity to improve on their own. The prospects for system improvement across all schools are greater when school districts have the capacity and take responsibility for providing leadership and support for improvement for schools within their jurisdictions (Ainscow & Hargreaves, 2010). In a comparative investigation of 20 improving school systems (based on student performance on international assessments) around the world, including school systems in the United States and Canada, Mourshed et al. (2010) reported that all the school systems investigated relied on a mediating layer between central authorities and schools to sustain improvements. In broad terms, the researchers concluded that agencies such as school districts acting at this mediating layer contributed to sustained school improvement by providing targeted hands-on support to schools, acting as a buffer

between individual schools and central government authorities and influence, and creating ways to share and integrate improvements across schools. Even when school districts involve other external agencies to support school improvement, district leaders still play a key role in ensuring the quality of that support, coherence across schools, and accountability (Supovitz, 2008; Datnow & Honig, 2008). We address the involvement of external providers of support in greater depth below. Fullan argues that system change and improvement requires a tri-level strategy that coordinates the leadership activity of external authorities (national, state, or provincial governments), with that of school districts (and their external partners) and schools served by districts (Fullan, 2010).

Current interest in the role and influence of school districts on the quality and improvement of teaching and learning in American schools is associated with several wide-scale changes in the context of public education since the 1990s. Foremost is the rise of standards and assessment-based accountability policies and processes at the federal and state levels, such as No Child Left Behind (NCLB) and Race to the Top (RTTT). In their inception, these policies and processes held individual schools accountable to the public and responsible for the quality and improvement of student performance. Over time, the role and responsibility of school districts in guiding, monitoring, and addressing gaps in quality indicators across the schools they serve came under increasing scrutiny and became a focus for intervention. Ohio's statewide system of support is partly a response to this trend. The shift towards high-stakes accountability in American education was accompanied by the invention of new types of school district-level organizations, such as New Orleans' Recovery District created to bring large numbers of low performing schools under a single district-like intermediate education agency with the intent to provide intensive interventions on a large scale to improve school performance (Hill & Murphy, 2011). Others have proposed and

implemented alternative versions of school district governance and support. These approaches emphasize decentralization of school governance, programming and external assistance, and a shift in the district role towards encouraging and managing a portfolio of variability in school types, services, and support, rather than being the primary source of professional direction, standardization, and support (Buckley et al., 2010). It no longer makes sense to view school districts as if they were all the same.

The growth in the number and variety of charter schools and for-profit and nonprofit external education management organizations (EMOs and CMOs) within and across the public school system is symptomatic of continuing political pressure from some interest groups to privatize education, albeit with public funds. It represents another change in the context of public schooling that challenges the traditional role and influence of school districts in leading and supporting school quality and improvement since charter schools remain under the jurisdiction of the public education system. While the incidence of charter schools and the active presence of CMOs and EMOs varies across states and districts, there is no question that charter schools, non-profit Charter School Management Organizations, and for-profit Educational Management Organizations bring into question the form and function of school districts and their professional not just administrative relationships with schools (Peltason & Raymond, 2013; Woodworth & Raymond, 2013; National Alliance for Public Charter Schools, 2021). EMOs and CMOs are among various external organizations that have become active partners in promoting and supporting school improvement in many districts (Farrell et al., 2013; Honig, 2004; Datnow & Honig, 2008; Marsh, 2008; Trujillo, 2014).

Finally, the expectations for student learning have broadened in the 21st century beyond the goals for and indicators of student performance on standardized tests in literacy, numeracy, and other traditional subject areas associated with conventional

standards and accountability policies and processes. Increasing emphasis is being placed on more ambitious levels of cognitive performance, on students' socio-emotional development and well-being, and student engagement with societal aspirations for equity and social justice, sustainable development, and climate change. In Ohio, this trend is reflected in the State documents and curriculum standards that highlight aspirations for equity as well as quality in teaching and learning opportunities and outcomes, and goals for student development and learning in four domains: foundational knowledge and skills, well-rounded content, leadership and reasoning, and socio-emotional learning (Ohio State Development Team, 2019). The means of achieving these goals are uncertain at the level of curriculum, teaching, and learning. The school district's role in guiding and supporting the attainment of such broader goals for student learning is uncertain and understudied compared to the knowledge about district effectiveness related to traditional measures of student performance. More knowledge has to be generated and shared about how school districts respond to challenges in the evolution of broader and more ambitious goals for student learning. The uncertainty at the classroom, school, and district levels has also increased in the current context of the COVID-19 pandemic. Restrictions on face-to-face interactions in the classroom and among teachers and with the school district personnel have forced a rapid shift to more online and virtual forms of communication, some of which may take hold and be continued beyond the current crisis of the pandemic. How these innovations and uncertainty will affect the role of school districts in leading, monitoring, and supporting education quality and improvement is a big question in the long run.

Overall, research and ongoing changes in the context of public education suggest the following reasons for paying attention to the role of school districts and their influence on school quality and improvement (including school leadership):

- **Alternative theories of action.** All school districts do not manage and support school improvement in the same way.
- **Influence on policy implementation.** Decisions and actions taken by school districts influence (positively or negatively) the implementation of policies and actions to improve schools.
- **Mediation of external policy.** Central government (national, state/provincial) policies are mediated by the interpretation and actions of school districts.
- **Variability in local professional capacity.** School districts vary in their internal professional and resource capacity to support school improvement.
- **School capacity building.** School districts are well situated in the education system to develop and support multi-school interventions aimed at building the capacity and improving and sustaining the quality of schools.
- **Coherence making.** School districts can strengthen the potential for system improvement by creating coherence in programming, professional practice, and improvement efforts across the system.
- **Diffusion of promising practices.** School districts are well situated to facilitate the identification, diffusion, and adaptation of promising practices between schools.
- **Sustainability of innovation and effective practices.** School districts have greater capacity than individual schools to address the challenges of sustaining productive educational practices and results.
- **Leading and supporting from the middle.** Central government education agencies lack the professional capacity to respond to the particular needs of every school, while individual schools do not have equal capacity to improve on their own.

- **Responsiveness to dynamic contexts.** The changing context of public education (e.g., governance and external support, broader goals for student learning, COVID-19) challenges traditional forms, structures, and processes of school district organization and knowledge about district effectiveness.

Effective Leadership in Medium and Small Districts

Research on school district effectiveness over the past 30 years consistently demonstrates that school district leadership and support can play an important role. One could argue that if only district leaders everywhere could learn to emulate what district leaders in academically effective districts do, then improvement could proceed uniformly across the public education system. The basic flaw in this argument is the underlying assumption that all school districts have equal professional capacity and resources, which is simply not true. Fundamental differences in district capacity are associated with district size, the number of schools they serve, and the number of central office professionals they employ.

There are nearly 14,000 school districts in the United States. Of these, about 2% (N= 287) serve over 25,000 students (mostly large urban and suburban districts), though they account for 36% of public school enrolment nationally. Over 11,000 districts serve fewer than 5000 students each (statistics from NCES 2016 database). In sum, nationally, the vast majority of school districts are small and located in small towns and rural regions of the country. Many of these districts are composed of a single secondary school, a middle school, and one to three elementary schools. Their district offices have more limited professional capacity (Davidson & Butcher, 2019; Forner et al., 2012; Hyle et al., 2010; Redding & Walberg, 2012). Some are led by single superintendents who perform multiple administrative, supervisory, and community relations functions,

sometimes with part-time classroom teaching responsibilities. In others, the superintendent is accompanied by small teams: for example, a business officer, a human resource officer, a curriculum or assessment specialist, and perhaps a person in charge of managing government categorical grants. Alternatively, system functions may be distributed among principals who perform hybrid roles as school and district administrators under the superintendent's leadership. This pales in comparison to a suburban Texas district studied by one of the authors where the Superintendent claimed that the district had more professional capacity than the State Department of Education. School districts in Ohio mirror the national pattern. According to 2018 statistics from the State Department of Education, Ohio has 611 school districts. Only three districts serve more than 25,000 students (Columbus, Cleveland, Cincinnati). There are mid-sized districts in cities like Toledo and Akron serving from 20,000 and 25,000 students. The vast majority are small districts in towns and rural areas that can be expected to serve small numbers of students and schools and have low internal capacity to support school improvement.

Much of the research on district effectiveness is based on studies carried out in large urban districts, often with high concentrations of disadvantaged low income, and minority student populations. Suggestions derived from research in these contexts are challenging to transfer directly to small, mostly rural districts with comparatively few students and schools and low professional capacity in the district office. There is less published research on small school districts, and it has not been synthesized and widely shared in the education research literature. In developing this review, we draw upon our own experience investigating school improvement in small districts, in addition to the

literature cited.³ While specific strategies for systemwide improvement may vary widely between large and small districts, we propose that the basic domains and underlying principles of action of effective district leadership are similar regardless of the district's size. This claim is consistent with the available research on leadership in small and rural districts (Forner et al., 2012; Hyle et al., 2010) and with our own experience working with and learning from small districts.

The literature and our experience with system improvement in small districts suggest two basic approaches to dealing with challenges with the professional capacity for improvement at the district level. One is to strategically and creatively leverage and develop existing human resource capacity within the district and schools. Some districts follow this practice and sustain districtwide support for improvement in teaching and learning (Supovitz, 2008). This can involve engaging school principals and leading teachers as district leaders. As noted, this may be particularly relevant but challenging for smaller districts where financial constraints may inhibit the employment of full-time district actors in system support roles. Snyder (2002) describes how New Haven Unified School District in California (a district serving 14,200 students and 12 schools)

³Togneri and Anderson (2003), for example, included a rural Maryland district serving eight schools and 2,795 students in a study of five improving school districts. Louis, Anderson, and Thomas (20XX) did a comparative analysis of how district leaders approached improvement in four small districts under different State policy cultures using qualitative data from a large-scale study of leadership and learning across nine states and 45 school districts of varying sizes. Anderson co-led an investigation of 12 Ohio schools that were awarded five-year school improvement grants (\$25,000 per year) under the State's Venture Capital whole school improvement initiative in the late 1990s (Thiessen & Anderson, 1999). The sample included three rural elementary schools, one rural middle school, and one rural high school. Five district case studies by Fullan, Rincón-Gallardo, and Watson (2015) include a small high school district in California (Whittier Union High School). Fullan and Rincón-Gallardo have also worked closely with El Dorado County Office of Education, in California, composed mostly of small, rural districts – including a few single-school districts.

developed and sustained local capacity to support high local standards for teaching and learning through the enactment of sustainable strategies to recruit, retain, induct and continuously develop teachers, reward expertise, and organize schools for effective instruction. Fullan et al. (2016) reported that the Whittier Union High School District, a relatively small district of five comprehensive high-schools, serving over 13,000 students, a high proportion of whom live in conditions of poverty, leverages teachers and principals as district leaders. About two in every five teachers in the district have a district leadership position as a course lead, department chair, or curriculum or assessment coach. At the same time, principals from all five high schools in the district meet as a group with the superintendent once a week to discuss and make decisions over regular district affairs.

A second approach to address limitations of professional capacity in small districts is to engage strategically with external providers with deliberate plans to shift responsibility to local expertise as it develops over time. External providers might include state education offices, regional education service centers, universities, other school districts, education technical assistance centers (like UC-SDI), education materials developers and vendors, community agencies, or private consultants. External support also features in studies about system-wide improvement efforts in many large districts (e.g., Supovitz, 2008; Finnegan et al., 2009; Marsh et al., 2005; Coburn et al., 2008). This practice, however, is more of choice than due to lack of district capacity per se. Regardless of the size, successful district partnerships with external support providers present challenges to be addressed by district leaders in collaboration with external partners.

Coordination of external support provider relations and activities. Some person or group at the district office level needs to take responsibility and have the time

to plan, coordinate and monitor the activities of external providers, and not let their relationships with the district and schools be simply controlled by the provider or left to the discretion of individual schools.

Funding for professional support agents and activities. Reliance on external provider expertise for professional support often comes with a price tag, even when it comes from state-supported entities like regional education centers. Funding for external support is a challenge when that support depends on sustainable funding beyond the start-up phase.

Adaptation of external support to local goals, needs, contexts. A significant challenge is to ensure that the interventions provided by external providers are a good fit and are strategically and incrementally refined and adapted to local goals and contexts. Local district actors have to proactively collaborate with the providers to assess the fit of external support to local goals and context and adapt accordingly. External support agencies, in turn, should include in their plans proactive learning about and adaptation of their services to the specific context and needs of the district. This is particularly so when professional development inputs are sought from agencies that offer activities simultaneously to multiple districts and provide more generic than context-specific content and learning experiences.

Coherence. Contracts with external providers present the risk of fragmentation and incoherence in the experience of teachers and school leaders when multiple schools are involved and when other school improvement interventions are underway. Effective partnerships with external providers involve intentional collaboration with district leaders to design and develop supports that the users experience as coherent and helpful.

Capacity for effective on-site follow-up support. Another challenge for work with some external providers, particularly those working with multiple districts, concerns their

capacity to provide intensive follow-up support on-site to all the sites they serve. Their input may be heavy on the front end and weaker in support of transferring knowledge and skills into practice.

Gradual release of responsibility from external expertise and development of local capacity. Districts are at risk of over-dependency on external providers for expertise and support and not paying sufficient attention to strengthening their internal capacity (knowledge, skills) so that support to schools can be sustained beyond the external providers' direct involvement. To mitigate this risk, district leaders should intentionally engage in the capacity-building activities of the external providers to gradually take on greater responsibilities in the design and delivery of capacity-building services initially provided by the external agency.

Monitoring and assessing the impact of external provider support and interventions. Finally, transparency in results or lack thereof is an important feature of effective, strategic partnerships between districts and external providers. In effective partnerships, districts and external providers monitor and assess the impact of the support and interventions of the latter, and decide on modifications and refinements based on evidence of impact or lack thereof.

Learning to Lead Effectively: The Link Between Knowledge and Improvement

Understanding what leaders in effective school districts do to improve performance is especially relevant to designing professional learning opportunities to build and enhance district leaders' leadership capacity, such as the one that inspired this literature review. But knowing what leaders in effective districts do and how they go about supporting school improvement is not sufficient to ensure leaders in other districts become more

effective. Most research on school district effectiveness does not examine how these districts became effective.

Furthermore, most research on the characteristics of effective districts assumes that these characteristics and related actions by local education agency leaders and staff can be replicated in local jurisdictions where they are not actively present. A problematic dimension of this assumption is the mistaken belief that simply creating expectations and providing information about what effective local education agencies do is sufficient to develop the motivation, professional knowledge, and skills local education agency leaders and staff need to do it well. Between 2018 and 2025, the Government of Chile is de-municipalizing the public system (345 municipal education agencies) and creating 70 local education services that will manage, supervise and support schools previously served by several municipal agencies. Traditionally, most Chilean municipal education agencies have performed mainly administrative functions (e.g., distributing government funds to schools, supervising compliance with government regulations, hiring and firing principals and teachers) and have relied on professional support from external technical assistance providers. The new local education services are expected to provide instructional leadership and support to school principals and teachers for which traditional municipal education agents have little preparation and prior experience. The role of central office professionals who act as intermediaries between the central office and schools is characterized more in terms of “accompanying schools” than supervising schools, thereby shifting the emphasis conceptually, if not yet practically, to support for improvement. Research on early implementation of the local education services revealed that one of the major challenges facing the implementation of the new local education services was to develop the professional knowledge and skills of local agency

employees to do this and to avoid replicating what municipal education agencies had customarily done that has not led to high-quality public schools (Anderson et al., 2021).

Goldring et al. (2018) investigated the experiences and outcomes of a four-year initiative to redefine principal supervision in six urban school districts in the United States after the third year of the project. The project aimed to help the districts change the role of district office-based supervisors of principals from its traditional focus on administration, operations, and compliance to one that would concentrate on developing principals' instructional leadership in schools. The project itself had four components: revising the principal supervisors' job description to focus on instructional leadership; reducing the number of principals assigned to principal supervisors; training the supervisors to develop their capacity to support principals; developing systems to select and train future supervisors; and strengthening district office structures to support and sustain changes in the principal supervisor role. Each district developed its training program drawing upon expert assistance from external providers. The training focused on helping the supervisors understand and identify high-quality instruction and processes and skills to develop principal's instructional leadership, such as participating in classroom walk-throughs, coaching principals, providing ongoing feedback, and facilitating networking amongst the principals they supervised. Some of the challenges reported included the need to balance time for training the principal supervisors and the increased time they spent in school supporting principals; ensuring that operational support was provided in addition to instructional leadership support as needed to principals; and restructuring other district roles and conditions to enable the supervisors to carry out their new instructional leadership support role. Importantly, although these were relatively large, well-resourced school districts, none of them had previously provided training to develop district supervisor skills to strengthen principals as

instructional leaders. Findings from the study demonstrated that strengthening the capacity of principal supervisors to actively support principals' instructional leadership development in schools did not happen naturally or simply by announcing a change in the job expectations. It required deliberate long-term training for the supervisors and redefinition and restructuring of roles and organization at the district level. This finding challenges any assumption that districts or other local education agencies can guarantee and strengthen the instructional leadership capacity of persons responsible for supervising principals simply through job descriptions and policy expectations.

Honig and her colleagues (Honig, 2013 a; Honig & Rainey, 2019) also addressed the mismatch between school performance demands and the conventional work practices and capacities of school district office staff organized around administration and compliance functions, not on supporting school improvement in teaching and learning. They identified and investigated what was happening in six districts of varying sizes where deliberate efforts had been made to develop central office capacity to help schools build their capacity to improve teaching and learning. They called this process "central office transformation." It involved rethinking and redesigning each central office function to focus on providing services that were most likely to help school capacity to deliver equitable and excellent teaching and learning and abandon those activities and services that do not (Honig & Rainey, 2020a). Like the project studied by Goldring and her research team (2018), these districts emphasized strengthening the role and capacity of central office leaders to work intensively in partnership with principals to support growth in principals' instructional leadership. Importantly, district leaders emphasized and modeled the responsibility of district leaders and staff to track, learn from, and continuously refine their efforts to focus system leadership and support on factors and strategies most likely to improve school performance.

In summary, knowing the *what* and *how* of effective district leadership is necessary but not sufficient for other districts to become effective. It requires that district leaders *learn* to become more effective through progressive cycles of action and reflection whereby new ideas or practices are tried out and constantly refined and strengthened upon examination of their results, in constant interaction with schools, the larger context, and the organizational culture of the districts where they operate. In the next section, we flesh out some of the key features of effective district leadership. We discuss and describe the *what*, and the *how* of effective district leadership. After that, we elaborate on six principles of learning that could orient the design of a professional learning program for district superintendents in Ohio.

Section II. The *What* and *How* of Effective District Leadership

This section elaborates on the practices, skills, and mindsets that leaders in effective districts use to enhance teaching and learning systemwide. The emphasis here is both on *what* effective district leaders do and *how* they go about doing it. As we argue throughout this section, effective district leadership is less about implementing with fidelity specific practices highlighted in the literature and more about iteratively developing increasingly specific strategies through constant tuning-in and interaction with the particular contexts, people, and organizational cultures (Fullan, 2019; Jones & Harris, 2020). It is less about getting people across the organization to do as they are told and more about unleashing and developing their talents and expertise to enhance student learning, wellbeing, and equity (Fullan, 2019; Rincón-Gallardo, 2019). We have organized this section into four subsections that correspond to the four system practices of Moving Your Numbers.

Prioritize Improvement of Teaching and Learning⁴

According to Ohio State Development Team (2019):

Districts, schools, and instructional teams focus improvement efforts on strategies for improving teaching and learning. Support for focused efforts comes from the engagement of all educators in the process, the instructional leadership

⁴For now, we decided to discuss the four system practices of Moving Your Numbers in a slightly different order than the one used in available documents about OLi-4. We place Prioritizing Improvement of Teaching and Learning first as we see this as the strategy most directly connected to the instructional core – the fundamental unit that has to be influenced if any lasting improvements of consequence are to be realized. We then move ‘outwards’ toward increasingly broader areas of work (capacity building, collaboration, and systemwide learning).

of principals, the use of a differentiated system for providing support, and the allocation of relevant human and material resources. (p. 25)

Clear Vision and Ambitious Goals for Teaching and Learning

Every school district that the literature has featured as being successful at improving student learning and achieving higher than expected learning outcomes for all student groups and schools places the improvement of teaching and learning at the center of its priorities. System-wide improvement and success for all students and schools are more likely in districts that establish a clear focus on attaining high standards of student achievement. This goes beyond broad mission statements to the designation and frequent communication of explicit goals and targets for student performance and engagement (e.g., academic results, attendance, retention, high school graduation). Effective school districts work intentionally to build a widely shared vision of learning and teaching: what they expect students should know and be able to do as a result of attending school and what are the pedagogical practices and learning environments that nurture the envisioned learning. A review of 23 studies of districts with trajectories of continuous improvement found that a districtwide focus on a widely shared set of beliefs about student learning was a key reason for their success (Shanon & Bylsma, 2004), a finding that is consistent with most recent case studies on effective school districts (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016; Johnson et al., 2015; Knudson, 2013; Zavadsky, 2009, 2016). In “positive outlier” districts where students from diverse ethnic/racial backgrounds perform better than expected in multiple measures of learning, equity is a central part of this vision (Burns et al., 2019). To operationalize – and realize – their visions for teaching and learning, effective districts link these visions to a small number of specific, measurable, ambitious goals linked to

teaching and learning (Darling-Hammond & Scott, 2019; Fullan & Rincón-Gallardo, 2016; Zavadsky, 2009). A reduced number of goals helps channel actors' efforts across the system and maintain a systemwide focus on a shared purpose. Linking the goals to teaching and learning helps ensure a clear through-line between the key improvement strategies of the district and the everyday work of students and teachers, the basic unit where the real accountability system resides (City et al., 2009). Setting ambitious goals for teaching and learning helps to create a sense of urgency to learn and get better among educators and leaders in schools and the district as a whole. In addition to setting a small set of ambitious goals for teaching and learning, effective districts design and continuously monitor and refine strategies to achieve them. This leadership practice is further described later in the review (Darling-Hammond & Scott, 2019; Fullan et al., 2016; Knudson, 2013; Zavadsky, 2009).

Theory of Action to Link District Strategic Actions with Improved Teaching and Learning

Establishing a districtwide vision of teaching and learning – with all the continuous work and effort it may take - is the easy part. In districts identified as effective, leaders work intentionally to ensure that such vision is not only visually present in classroom walls, school hallways, and district offices, but more importantly in the heads, hearts, and hands of teachers, school and district leaders, and other actors involved in the everyday activities of schools and the district. Effective districts place a special emphasis on exerting influence on the ‘instructional core’ – the interaction between teacher and student in the presence of content (City et al., 2009; Cohen et al., 2003). This influence might be indirect, but it is intentional. Beyond setting a clear vision and ambitious measurable goals for teaching and learning, effective districts offer

multiple opportunities for actors across the system to observe, learn, practice, and continuously refine their skill to bring those visions to life in their everyday practice (Burns et al., 2019; David & Talbert, 2013; Fullan et al., 2016; Knudson, 2013; Roza & Heyward, 2015; Shannon & Bylsma, 2004; Zavadsky, 2009, 2016). One powerful way to operationalize systemwide learning is the development and continuous testing and refinement of a theory of action (Argyris & Schön, 1978; City et al., 2009) that intentionally links the key strategic actions of the central office with their intended results.

The systemwide focus orients school leaders unequivocally towards student learning-focused improvement efforts with their teachers and communities. Importantly, it does not define system goals for student learning simply in terms of performance goals, such as raising the percentage of students achieving adequate or higher performance on system assessment indicators of student learning. It focuses attention on mastery of skills associated with the visions of powerful student learning and teaching practice in action (Donohoo & Katz, 2020) that contribute to higher performance.

Deliberate attention to strengthening the instructional core to enhance and deepen learning for students of any race, ethnicity, socio-economic status, or ability status is perhaps the most direct way to build unity of purpose (Fullan, 2019; Rincón-Gallardo, 2019) among actors across the system, all the way from classrooms to the central office. When done effectively, changing the instructional core in ways that deepen and enhance student learning and engagement leverages and feeds the intrinsic motivation of school-based educators to make a meaningful difference in the lives of the young people they serve while also serving the district's purpose of improving educational equity and quality. Almost invariably, teachers and school leaders in the most effective districts identify supports from the district to enhance and deepen their teaching practice as one of the most important reasons for their satisfaction with,

allegiance to, or appreciation for the district office (Burns et al., 2019; Brandon et al., 2015; Fullan et al., 2016; Johnson, 2019). Furthermore, the forging, spread, and continuous review and refinement of a shared purpose linked to learning and teaching in schools and across the district is a very important aspect of the regular work of effective school district and school leaders (Burns et al., 2019; Brandon et al., 2015; Fullan et al., 2017; Fullan et al., 2016). As Michael Fullan (2019) puts it, the work of a leader, immersed in a great diversity of details, is to help forge unity of purpose and action, which involves a continuous process of integrating a collective sense of purpose and the development of individual and collective capacity for improvement consistent with that purpose.

In effective districts, professional learning is focused on cultivating and strengthening the practices, habits, and skills that teachers and principals need to effectively enhance teacher practice and student learning. They provide multiple opportunities for teachers and school leaders to experience improvements individually and collectively in the mastery of their professional practice, develop shared ways of thinking and talking about effective practice, and see the effects of changes in their practice on student learning processes and outcomes. These experiences feed their internal motivation to do their part in achieving the school and district's purpose and goals. The opportunities for teacher collaboration – within and between schools – offered by effective districts represent another important vehicle to continuously build unity of purpose around enhancing learning opportunities and outcomes for all students. District leaders in academically successful school systems communicate confidence in the capacity of school system personnel to achieve high standards of learning for all students and high standards of teaching and leadership from all instructional and support personnel.

Building Coherence around Vision and Goals

Case studies of districts that have transformed themselves from low or mediocre to high performing systems (in terms of student results) often allude to pre-reform circumstances in which there was little consistency in curriculum content, instructional approaches, and curriculum materials between schools and even within schools. They associate the lack of consistency with prior district commitments to decentralization and site-based school improvement without strong curriculum leadership from the district. And they attribute their success to developing a coherent system of instruction, curriculum, and assessment. Indeed, what distinguishes successful districts from others is their deliberate effort to take a systemic approach to improve teaching and learning (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016; Zavadsky, 2009, 2016). This can mean providing more support to understanding and using government curriculum policies and/or developing a local curriculum consistent with those curriculum policies. The problem of “coherence” from the district perspective can vary, depending on the perceived relationship between prior and existing curriculum across the district to external curriculum policies and standards of state and federal governments (Louis et al., 2011). In some cases, the focus of district-wide improvement efforts is to help bring schools more into compliance with external expectations for curriculum and accountability as an initial phase of improvement in district-wide performance. In other cases, district officials define the problem in terms of strategically adapting and aligning externally mandated expectations with more ambitious and locally responsive curriculum and its implementation in schools. In either approach, the emphasis on curriculum coherence often extends to advocacy and support for using specific instructional

approaches and strategies said to work well with the content, learning outcomes, and learners in play.

The development or adoption of system-wide curricula and instructional materials by districts takes place in the context of external and local standards for curriculum and learning. Alignment of the curriculum to these standards and associated assessment programs (standardized assessments of both results and progress) at the school and local system level becomes a major focus of attention. Successful local education agencies under these conditions can demonstrate that the curriculum taught mirrors the curriculum expected and that assessments of student performance are consistent with both the expected content and performance standards (Burns et al., 2019; Leithwood, 2010; Leithwood & McCullough, 2017).

Alignment of curriculum, assessment, and instruction is a fundamental step in developing coherence in school districts. We have not found a single school district identified as effective in the literature that does not do this. However, some cases reveal a deeper level of 'coherence,' which Fullan and Quinn (2015) define as "shared depth of understanding about the purpose and nature of the work" (p. 1). In this definition, the system is coherent when most of the people working in it, regardless of their formal position in the system – a classroom, a school, the district, understand and can articulate with eloquence the core goals of the system, the strategy to achieve those goals, and how their everyday actions connect to and contribute to such strategy and goals. Coherence is an inter-subjective phenomenon – it does not exist if it is not experienced by most actors of the system – and as such, it can only be realized through constant, purposeful interaction among and between actors in all levels of the system. Effective districts support this type of continuous, focused interaction within and between schools

(Burns et al., 2019; Fullan et al., 2016; Knudson, 2013) and between the central office and schools (Brandon et al., 2015; Johnson et al., 2015).

In a highly coherent district, district-supported programs, policies, and strategies are focused on the core priorities of the district. Distractors that move the attention of people in the system away from those priorities are proactively dealt with and mitigated. Some research on education leadership challenges the assumption that families of students attach a high priority to the aims for academic success championed by district and school educators. In traditional rural settings, for example, student motivation and family expectations may center more on the sense of care and belonging to the local community and on preparation for work in local enterprises that do not require academic excellence and formal post-secondary education (Redding & Walberg, 2012; Rey, 2014). That need not necessarily translate into opposition to the visions and goals of educators. However, it does suggest that school system leaders and teachers need to be sensitive and responsive to the aspirations of the communities they serve without abandoning their commitments to their professional visions for teaching and learning.

In this section, we discussed how effective districts go about prioritizing the improvement of teaching and learning. Table 1 presents three key domains for this system practice.

Table 1. Prioritize Improvement of Teaching and Learning

- *Developing a clear vision and a small number of ambitious goals for powerful learning and effective pedagogy for all students, placing these at the center of the district's improvement strategy.*

- *Developing a theory of action* that links strategic actions of the central office with the district's vision and goals for quality and equity in teaching and learning.
- *Developing coherence in the district's human and resource capacity and strategies to address the district vision, goals, and theory of action* to improve teaching and learning.

Build Capacity through Support & Accountability

According to Ohio State Development Team (2019):

Districts expand capacity system-wide through a reciprocal system of support and accountability. Efforts to build capacity are intentional, matched to district goals, based on relevant data, and responsive to the needs of personnel. (p.25)

Attracting, Supporting, and Retaining the Best Teachers and Leaders

The principle of reciprocal accountability proposed by Richard Elmore (2002) is at the core of the work of effective districts. For every unit of increased performance expected from teachers and schools, the system commits the resources and support required to produce it and holds itself accountable to the intended beneficiaries for their delivery. To begin with, districts that believe that the quality of student learning is highly dependent on the quality of instruction organize themselves and their resources to attract and retain highly qualified teachers and to support continuous instruction-focused professional learning for teachers. A recent quantitative analysis of the variables associated with district student performance finds a significant negative association between the percentage of teachers holding substandard credentials in a district and

student achievement. Districts that have avoided the effects of teacher shortages by recruiting and retaining fully prepared teachers are much more likely to produce strong student achievement, both for students of color and for White students (Podolsky et al., 2019). A qualitative study of seven “positive outlier” districts in California where students of diverse racial/ethnic groups are consistently outperforming their peers of similar backgrounds from families of similar income and education levels in most other districts in the state found that all these districts were proactive at creating robust pipelines for educator and principal hiring, often through partnerships with a university and “Grow Your Own” programs. These districts also invested significant effort and resources to develop and retain teachers through strong mentoring programs, professional learning opportunities, and, more broadly, through the cultivation of engaging working environments and a positive organizational culture (e.g., Snyder, 2002). Indeed, some evidence suggests that districts where students of diverse backgrounds perform at higher levels than expected have teachers and school leaders who are less likely to leave their schools and the profession than their peers in other districts (Burns et al., 2019).

Developing Capacity for Leadership and Collaboration at School and District Levels

Another hallmark of districts that have succeeded in moving from lower to higher student performance is an intensive long-term investment in developing instructional leadership capacity at the school as well as at the district levels (Anderson, 2006; Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016; Leithwood, 2010; Leithwood & McCullough, 2017; Togneri & Anderson, 2003; Zavadsky, 2009). At the school level, these efforts focus at least on principals. In many such settings, however, reform efforts

include the establishment of school-based teacher leader positions to work closely with principals and with local and external consultants to provide and support professional development (e.g., demonstrations, in-class coaching, facilitating school-based professional development arrangements) to individual teachers and teams of teachers (grade level, cross-grades) in the targeted focuses of reform. Principals and district supervisors alone are not expected to provide the intensity and frequency of school-based professional assistance teachers require to implement significant changes in practice and student learning in the classroom. Professional development is also provided to teacher leaders in the content focuses of local reforms (e.g., curriculum standards and content, instructional strategies, analyzing student data) and change process strategies (e.g., classroom coaching methods).

Principals, however, are the main priority for instructional leadership development in these districts. The emphasis is on helping principals develop the knowledge, skills, and dispositions to effectively engage with and support teachers in their efforts to assess student performance in relation to the district and state standards and improvement focus; to involve teachers in developing school improvement plans focused on school needs in the context of district priorities for improvement; to become skilled at evidence-informed decision-making; to facilitate teacher learning to implement effective instructional practices; and to become skilled observers and interpreters of the quality and progress of teaching and learning in their schools. Successful districts mount long-term professional development programs for practicing principals that typically involve a combination of off-site PD activities (e.g., summer institutes) and a variety of professional learning supports built into their regular working schedule throughout the year (e.g., monthly “principals conferences” led by local education agency leaders and professional staff; reform-focused professional support groups and

networks of principals across the system; mentoring and coaching of new and struggling principals). Case study researchers report that many of these districts favor in-house principal leadership development programs over the kinds of generic credential-oriented principal training programs typically offered at universities (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2015; Togneri & Anderson, 2003; Zavadsky, 2009). This extends to the in-house recruitment and creation of local professional learning opportunities for promising principal candidates from the district teacher corps. More recent research highlights the importance of questioning and developing the capacity of district leaders responsible for supervising and supporting the instructional leadership of principals (Honig & Rainey, 2019, 2020a; Goldring et al., 2018).

The mere act of providing leadership development opportunities and experiences for principals certainly does not guarantee the quality of those professional learning activities (Leithwood et al., 2019). In effective districts, the approach and strategies for in-service professional development are grounded in education research on teacher and principal learning in the context of innovation implementation and educational reform. In these settings, there is little to no professional learning in the form of one-shot workshops, and talks by external experts, focused on the individual teacher or principal interests or the professional preferences of external consultants. In the most effective districts, professional learning is never, or barely, delivered off-site or after work, with little or no organized follow-up and support in the classroom and school, and with no linkage to school or district goals for improvement in student learning and program. More effective districts provide intensive off-campus and school-based professional development experiences and opportunities for practicing teachers and novice principals. These experiences typically combine thoughtfully sought, and curated input from external and local experts focused on school and district priorities for improvement

and justified by evidence of need (e.g., student and school assessment data). The learning experiences go beyond the conventional workshop or presentation format to include such things as inter-visitations, demonstration of practice, on-site coaching, and teams of teachers doing lesson study, curriculum or lesson planning, and analysis of student work and assessment data (see best evidence synthesis by Timperley et al., 2007).

The organizational and contractual challenges of providing this kind of school-based professional development as an integral part of teachers' and principals' workday are daunting. Still, these kinds of professional development experiences are commonly associated with district success in improving and sustaining high-quality student results system-wide. An additional feature of these more effective, locally supported professional development efforts is that they are usually marked by a sustained focus on instructional improvement linked to district reform priorities (e.g., reading, mathematics) over more than one year. Notably, in these settings, continuous practice-focused professional learning becomes integrated into teachers' and school leaders' work rather than as an occasional event. School leader support for teachers' professional learning involves more than providing resources and making arrangements for ongoing professional learning activities. While principals cannot be experts in all areas of change and improvement in teacher practice, they are expected to actively participate as co-learners in targeted teacher learning.

As previously noted, much is known about the needs and professional development of school leadership (principals in collaboration with teacher leaders) to guide and support equity and quality in teaching and learning at the school and classroom level. Attention to strengthening the professional capacity of central office leaders to assist school leaders in achieving these goals and, more broadly, to develop a

coherent system focused on the continuous improvement of teaching and learning has generally been absent in the research literature. It will be the focus of much of what we have to say in section III of this review.

While effective districts work to create coherence in curriculum, teaching, and leadership across schools, they also differentiate support for improvement to schools. Many analysts of the role of districts in education reform comment on the dynamic tension between system-wide goals and focus for reform and the need for educators at the school-level to assess the particular learning needs of students and teachers in each school, and to plan and organize in ways that fit their specific contexts (Bryk et al., 2015; Fullan et al., 2004; Marsh, 2002; Massell & Goertz, 2002; McLaughlin & Talbert, 2002; Togneri & Anderson, 2003). Anderson et al. (2012) empirically analyzed how four medium- to large school districts (20,000 to 50,000 students) considered and addressed variability in school characteristics, needs and performance (see also Childress et al., 2007; Moore et al., 2015; Fullan & Gallagher, 2020). Anderson et al. (2012) identified two distinct thrusts of differentiated support: differentiated support aimed at assisting schools to effectively implement district-wide policies and expectations for professional practice as a first-order solution to performance challenges in schools; and differentiated support for innovation and experimentation with non-standard solutions to performance challenges in schools that do not seem solvable simply through implementation of standardized programs and practices endorsed and supported by the district. In either instance, an individual school's learning challenges and conditions might differ from those of other schools. The most fully developed systems of differentiated support for improvement encompassed three types of intervention strategies: (1) developing central office capacity to customize assistance to school-specific circumstances and needs; (2) developing the capacity of school personnel to understand and solve their problems

(within the parameters of district policies and expectations); and (3) creating systems to facilitate networking and sharing about school improvement concerns and practices amongst schools (rather than depending entirely on the central office for solutions). Embedded in these findings is the assumption that districts have or can develop the organizational capacity to effectively support all schools in the quest for high-quality teaching, learning, and school leadership.

Building Capacity to Collaborate Effectively

Collegial work groups (e.g., grade-level teams, school improvement teams, district leadership teams), sharing of expertise, networking of classroom teachers and school leaders across schools, cross-role leadership, and school improvement teams at school and district levels – all these and many other configurations of professional educators collaborating on student achievement-focused central and local reform initiatives are indicative of a common emphasis on teamwork and professional community as one of the keys to continuous improvement. As argued by Elmore and Burney (1999, p.5), “shared expertise is the driver of instructional change.” Teachers (and others) are more likely to understand and assimilate new professional practices when learning together and supporting one another (Little, 1982; Rosenholtz, 1989). Effective solutions to challenges for student learning, teacher learning, and organizational change are more likely to emerge through professional collaboration. Fullan et al. (2004) characterize this as lateral capacity building, emphasizing the importance of knowledge sharing and transfer about effective practices in the district change context. Collaboration is also key to developing and sustaining goal consensus, shared beliefs, and commitment to reform.

Practically all studies on effective school districts of the most recent decade highlight the crucial role that professional collaboration within and between schools plays

in school improvement and the specific ways in which districts support effective professional collaboration among teachers and principals (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016; Johnson et al., 2015). By 'effective collaboration,' we mean collaboration that examines and improves learning, teaching, and leadership practice in light of data and broader evidence on student learning, professional practice, and learning conditions. Capacity building through professional capital is considered a fundamental aspect of Ohio's strategy to promote inclusive instructional and organizational leadership and is operationalized through three key leadership team structures: District Leadership Team (DLTs), Building Leadership Teams (BLTs), and Teacher-based Teams (TBTs) (Ohio State Development Team, 2019)

District support for professional collaboration includes allocating time and resources for professional collaboration within and between schools, as well as guidelines and professional learning to support teachers and administrators in learning how to collaborate effectively. That is, how to collaborate in ways that translate into improvements in their leadership practice, pedagogy, and student learning – and how to support effective collaboration (Burns et al., 2019; Fullan et al., 2019; Donohoo & Katz, 2020). In their investigation of five improving school districts, Togneri and Anderson (2003) characterized this as working on working together.

Among some of the most crucial features of effective collaboration identified by recent research are the development of strong relationships of trust and shared responsibility for the learning of all students, distributed leadership, and the use of specific protocols or processes that engage participants in continuous cycles of collaborative inquiry (Datnow & Park, 2019; Hargreaves & O'Connor, 2019; Rincón-Gallardo & Fullan, 2016). While the specific approach to collaborative inquiry might vary from school to school or from district to district, its key components include the following

sequence: i) examining existing practice in light of the evidence of student learning and teaching practice; ii) designing solutions/changes in practice; iii) implementing the solution/change; iii) assessing impact; iv) back to i). The 5-step sequence of the Ohio Improvement Process designed to guide the continuous improvement work of district leaders, principals, teachers, parents, and community members (Ohio State Development Team, 2019) is consistent with the current knowledge on effective collaboration for improvement.

One of the challenges of professional collaboration between schools, for example, in school networks, is that successful implementation of plans for intervention and improvement arising out of the deliberations of inter-school teams is contingent upon the strength and focus of professional collaboration within each participating school. Where professional collaboration and community are weak in a school, the prospects for implementing proposals and plans emanating from school participation in networks are low. Bryk et al. (2017) and others (Katz, et al., 2009) argue for the development of 'networked learning communities, with the implication that district support needs to encompass measures to strengthen school-based professional communities as well as collaboration between schools.

Beyond providing support for effective collaboration within and between schools, some of the most effective districts commit to modelling in the central office the type of open and collaborative culture they want to encourage schools to establish. It is often the case that district leaders redesign district staff roles and responsibilities to better serve the core vision and goals of the district for enhanced equity and quality in teaching and learning (Hargreaves & Braun, 2012; Honig, 2013b; Honig & Rainey, 2020b). They may increase cross-unit collaboration to enhance internal coherence between the different areas of the central office (Johnson et al., 2015; Fullan et al., 2017; Honig &

Rainey, 2020b) or directly assign some schools to different district leaders to strengthen support, collaboration and communication between the central office and schools (Brandon et al., 2015; Fullan et al., 2016; Johnson et al., 2015). Attention is given to monitoring and adjusting the number of schools these district leaders support so that they can effectively interact with and support those schools individually and together (Goldring et al., 2016; Honig & Rainey, 2020b).

Advancing equity in learning opportunities and outcomes often also involves working to identify, challenge, and transform preconceived notions or unconscious biases that teachers and school leaders may have of the abilities and potential of different groups of children (Burns et al., 2019; Hargreaves & Braun, 2012). Districts that effectively manage to challenge and transform these unconscious biases explicitly and continuously state and spread the belief in the right and capacity of all students to learn at high levels (Hargreaves & Braun, 2012). They also engage school leaders and teachers with student data that contradict those biases by giving teachers and school leaders access and exposure to colleagues, classrooms, and schools serving similar student populations that are achieving better results, and coaching and support to identify, challenge, and change their dispositions and practices towards students they may consider of lesser ability or potential (Burns et al., 2019).

In this section, we discussed how effective districts go about building capacity through support and accountability. Table 2 presents three key domains for this system practice.

Table 2. Build Capacity through Support and Accountability

- *Developing evidence-informed strategies to attract, support, and retain highly qualified teachers, school leaders, and district leaders.*
- *Developing capacity for inclusive instructional leadership at school and district levels grounded in evidence of student learning and professional practice, and differentiated in light of school contexts and needs.*
- *Supporting the development of cultures of effective collaboration to examine and improve learning, teaching, and leadership practices in light of evidence of student learning and professional practice;*

Sustain an Open and Collaborative Culture

“Districts shape their organizational cultures in ways that make those cultures collaborative, caring, equitable, and amenable to positive change” (Ohio State Development Team, 2019, p. 25)

Strong relationships of trust, high expectations, mutual learning, and reciprocal accountability are the backbone of effective districts (Fullan, 2020; Johnson et al., 2015). Effective districts cultivate strong relationships and collaboration internally (within and between schools and within the district office), *downward* (between the central office and schools), laterally (with other districts, with families, communities, and other stakeholders), and vertically (with the board and the state).

Modeling and Cultivating Trust and Reciprocal Accountability

Trust is the backbone of effective collaboration in organizations (Covey, 2006; Shockley-Zalabak et al., 2010), and in particular, in schools (Bryk & Schneider, 2002; Daly & Chrispeels, 2008; Tschannen-Moran, 2014) and education systems (Bourbonnais-MacDonald, 2017; Schmidt, 2010). Effective districts make deliberate efforts to cultivate trust across the organization. Leaders in these districts communicate openly their trust in the capacity of their teachers and school leaders to make a positive difference in the learning and wellbeing of all students. They make sure to deliver on the promises made and model the open and collaborative culture they want to establish. They also maintain open channels of two-way communication with schools and other relevant stakeholders to stay attuned and respond to concerns, challenges, and opportunities to improve teaching and learning for all students.

School district administrators and professional staff communicate a strong sense of trust in the capacity of their teachers and school leaders. They communicate and cultivate individual *and* collective efficacy in their work together to sustain and improve teaching and learning. You cannot gain confidence simply by being told to be confident. Confidence has to be earned or developed through one's actions. This confidence is nourished by specific actions to address explicit goals and objectives for achievement and improvement, to collaboratively assess progress towards those aims, to investigate the circumstances contributing to performance gaps, to make or facilitate interventions to address identified gaps in their particular local contexts, and to learn from those efforts about how to improve (Donohoo, 2016).

Leaders in effective districts show willingness to identify performance gaps (student, teacher, school) and obstacles to success, accept responsibility, and seek solutions. This goes beyond being cheerleaders, setting expectations and holding people accountable, to providing assistance as needed, and collaboratively investigating

and learning from the effects of those interventions. Leaders in districts that have been effective in closing gaps in learning opportunities and outcomes among student groups explicitly espouse and promote their belief in the capacity of all children and young people to learn, regardless of their race, ethnicity, gender, language, ability status, or socio-economic status. All seven positive outlier districts featured in a recent study by the Learning Policy Institute in California (Burns et al., 2019) and all six successful districts from Alberta, Canada, featured in a cross-case study of effective district leadership (Brandon et al., 2015) explicitly include equity in their directional vision for teaching and learning. These visions are not simply statements of belief but of commitment to ensure high levels of learning and wellbeing to all their students and to reciprocal accountability of the districts to providing support to schools. This mirrors the vision of district leadership involvement in the steps of the Ohio Improvement Process (OIP), mainly as it refers to the involvement of district leaders in implementing iterative cycles of collaborative improvement in their efforts to lead and support contextually embedded improvement across the system.

Studies of teacher and principal effectiveness, as far back as the 1980s, report that more effective educators communicate high degrees of confidence in their individual and collective capacity to teach and reach expected learning goals and outcomes for all students (Donohoo, 2016; Rosenholtz, 1989; Tschannen-Moran et al., 1998; Tschannen Moran & Geiss, 2007). Where existing practices do not yield desired results for some students, these educators talk and act confidently about their capacity to find or create and implement alternative practices to better serve those students. They attribute student learning results to their individual and collective actions as teachers and principals and less to external factors beyond their control (e.g., family circumstances, student personality, external funding). Psychologists characterize this as a sense of

personal and collective efficacy (Bandura, 1997, 2000). It is more a mindset of beliefs about the power of one's work to achieve intended results than specific behavioral practices, per se, although their actions and self-confidence are closely linked. The individual sense of efficacy can extend to collective efficacy in people's collaborative and interdependent work in teams (Bandura, 2000; Donohoo, 2016; Donohoo & Katz, 2020; Goddard et al., 2004).

A positive sense of efficacy emerges from experiencing and seeing positive results of these actions (mastery and vicarious experiences), from receiving positive feedback from others about the value and impact of actions, and from the subjective feelings of success associated with these accomplishments (Bandura, 1997; Donohoo & Katz, 2020). Sense of collective efficacy at the district level has been shown to influence principals' sense of efficacy in their ability to lead and support effective teaching and learning (Leithwood et al., 2007).

Leaders in effective districts also build trust by staying attuned to and learning about the context and evolving needs and circumstances of educators, school leaders, and other stakeholders. To keep their fingers on the system's pulse, effective districts, regardless of their size and their centralized or decentralized structure, develop channels of ongoing two-way collaboration and communication with school-based staff and commit to providing the necessary resources and support for schools to produce the desired results. In sum, these districts develop reciprocal accountability (Elmore, 2002; Fullan et al., 2015; Johnson et al., 2015). Teachers and principals have expertise and knowledge of the context and culture of their schools and the communities they serve that can be leveraged to craft visions and design strategies with greater chances of success. Additionally, school-based actors can offer crucial input to the district regarding the feasibility and desirability of the programs, changes, or improvements promoted by

the district. District leaders who deliberately take a learning stance to their work are more alert to clues from the context and the people they lead and can access relevant salient information and resources that they can use to fine-tune and continuously improve the district's strategy.

Leaders in districts with high degrees of coherence work continuously to identify whether and to what extent district initiatives and requirements are experienced by users as consistent, clear, helpful, disjointed, or disruptive, and work to reduce distractors and fragmentation. This includes identifying and removing institutional programs, processes, or requirements that constrain the full realization of the districts' goals; letting go of initiatives, programs, and practices that have no clear link to the district's goals; and providing multiple opportunities for school and district personnel to gain familiarity with, integrate, and provide input to the district's policies and programs (Fullan et al., 2016; Fullan et al., 2017; Honig, 2013; Honig & Rainey, 2020 b).

Trust building with teacher associations plays a very important role in setting the environment for district initiatives and their fate. A strong working relationship between districts and teacher associations is a fundamental feature of many effective districts. Saul Rubinstein and John McCarthy have conducted research to assess the relationship between district union-management partnerships, the strength of teacher collaboration, and student achievement. Through qualitative case studies of six high performing districts with strong union-management partnerships in California, Florida, Virginia, New York, Minnesota, and Ohio (Rubinstein & McCarthy, 2012) and qualitative studies that measure the relationship between the strength of union-management partnerships, patterns of teacher collaboration in schools, and student achievement (Rubinstein & McCarty, 2014, 2016), they find that: 1) The strength of union-management partnership in a school has a positive and significant effect on the frequency and quality of teacher

collaboration and on student achievement, both in achievement scores and in rates of improvement in performance from one year to the next (Rubinstein & McCarthy, 2014); 2) These positive effects hold after controlling for poverty (Rubinstein & McCarthy, 2014, 2016); and 3) Stronger union-management partnerships at the district level are related to stronger teacher collaboration within schools in a district (Rubinstein & McCarthy, 2016) as well as with more frequent informal communication between principals and union representatives, lower teacher turnover, stronger commitment of teachers to the school – especially in high-poverty schools - more frequent connection with other schools, and a stronger sense among school-based union leaders of their role in supporting teacher collaboration in schools (McCarthy & Rubinstein, 2017).

Developing Effective Collaboration and Shared Leadership Vertically

Effective districts intentionally develop an open and collaborative culture “vertically” in their relationship with schools. The success of any reform, policy, or program rests ultimately on the extent to which those expected to adopt it in their everyday practice make it their own. Systemwide learning in school districts is most effective when it is driven by relationships of co-learning, co-design, and mutual influence between the central office and schools, or what Fullan (2019) has recently called “joint determination.” As Johnson and her colleagues (2015) argued in their study of highly effective districts in the United States, regardless of their centralized or decentralized configuration, district success was a function of effectively managing the relationship between the central office and schools. In centralized systems, district strategies succeeded when they were continuously informed by educators' knowledge, skills, and experiences from all system levels. True reliance of district administrators on the experience and advice from school-based educators to improve their centralized system increased trust within schools about

the good intentions and judgment of central administrators, as did ownership of and commitment to the district's strategy. In more decentralized systems, district strategies succeeded when the central office provided schools with the assistance and training they needed to make good decisions and created rich opportunities for schools to learn from one another.

A study of 30 effective rural districts from 18 states found that district leaders highlighted the importance of creating an environment of mutual respect and cultivating buy-in from teachers (Roza & Heyward, 2015), a finding that is consistent with recent case studies on effective districts (Brandon et al., 2015; Burns et al., 2019; David & Talbert, 2013; Fullan et al., 2016; Johnson et al., 2015; Knudson, 2013; Zavadsky, 2016). Louis (1989) observed that district central offices vary in the nature and strength of their relationships with schools depending on their degree of reliance on bureaucratic controls (e.g., rules and regulations) and organizational coupling (e.g., shared goals, communication, joint planning, and coordination) to manage those links. Some districts are highly bureaucratic yet decoupled systems (reliance on rules leaving schools to operate in relative isolation with little district leadership and support). Some operate as both strongly coupled and rule-based systems (contributing to conflictual relations and resistance by schools). Others are loosely coupled and non-regulatory in relationships with schools (creating high autonomy within and among schools, with direct influences expressed more through informal relations than direct authority and controls). Louis described the fourth set of districts as tightly coupled and non-regulatory and associated this type of district-school relationship with normative consensus on goals and shared management through structures and processes that promote frequent communication, joint decision-making, and planning. The contemporary emphasis on professional collaboration and joint determination favors district-school relationships that grow more

through organizational coupling than bureaucratic controls in Louis's terms. Studies of effective superintendent leadership in small rural districts highlight inter-personal contact and communication between district leaders and school personnel, as well as with parent and community stakeholders (Redding & Walberg, 2012; Forner et al., 2012), as a key feature of district-school relations and district reform efforts.

Many effective districts have reorganized the central office so that district administrators stay in close contact and collaboration with a small number of schools in a monitoring and support role (Brandon, 2015; Burns, 2019; Fullan, 2016; Honig et al., 2010; Johnson et al., 2015) In their studies of district efforts to shift the role of district professionals traditionally responsible for principal supervision from administrative matters and compliance with external expectations, Goldring et al. (2018) and Honig and Rainey (2020a) report that the workload for district supervisors in this strengthened support role in larger districts is about a dozen schools.

There are multiple ways in which effective districts support and leverage shared leadership, which may include: involving teacher leaders in the development of common assessments aligned with state standards (Fullan et al., 2016); continuously pursuing input and feedback from school leaders and teachers in decision making, design, or roll-out of ideas for school improvement (Johnson et al., 2015); engaging teacher leaders in the identification of professional learning needs and the design and delivery of professional learning opportunities for schools in the district (Brandon et al., 2015; Fullan et al., 2016; Knudson, 2013); or involving school leaders and staff in the selection of new teachers and school leaders (Burns et al., 2019; Knudson, 2013; Zavadsky, 2009)

Connecting and Collaborating Laterally and Upward

Some scholars in the educational change field have started to pay attention to the intentional connection and influence that leading districts can exert on other districts and the larger state/provincial system. In their study of a network of districts in Ontario that were assigned with the task of finding effective solutions to increasing educational opportunity and outcomes for students with special needs, Andy Hargreaves and Henry Braun (2012) noticed that the leadership teams in these districts worked deliberately to exert influence in three directions: downward (supporting and building the capacity of schools), laterally (connecting and collaborating with leaders in other districts), and up (leveraging and influencing policy at the provincial level). Hargreaves and Braun coined the term “*Leadership from the Middle*” (p.15) to describe this approach to leadership. This concept has been adopted and further developed and explained in Fullan (2015a); Fullan et al. (2020); Hargreaves and Ainscow (2015); and Hargreaves and Shirley (2020).

With the emergence of district networks over the past decade, the collaboration between districts is gaining traction as a field of inquiry (CAED, 2015; Hargreaves & Braun, 2012; Hargreaves & Shirley, 2020; Fullan & Rincón-Gallardo, 2016; Rincón-Gallardo & Fullan, 2016; Westover, 2020). District networks are proliferating faster than the research documenting their dynamics and impact. For now, it should be pointed out that effective collaboration between districts seems to be similar to effective collaboration between schools. It involves developing a shared purpose and vision linked to ambitious goals for learning, equity, or wellbeing. It requires and feeds trust and internal accountability. It involves specific processes or protocols for collaborative inquiry where district leaders examine their leadership practice in light of evidence of school, teacher, and principal performance; and involves constant formal and informal communication and collaboration between network members. While the research base

for district networks is only emerging, it is reasonable to expect that focused, strategic collaboration between districts becomes an increasingly important vehicle to enhance leadership capacity in districts, improve district performance, and positively influence state and provincial education systems.

The literature on district effectiveness recently started to emphasize effective partnerships between district leaders and other stakeholder groups in reform planning and implementation, including parents and communities, business and civic leaders, and foundations. The Learning Policy Institute in California (Burns et al., 2019) found that positive outlier districts develop focused partnerships with multiple stakeholders to support school improvement, equity (e.g., reading, mathematics), or student learning and wellbeing. Positive outlier districts engage students' families and leverage community resources to support student success. These districts extend their services in two major ways. First, they provide opportunities for caretakers to actively engage with schools and their children's learning (e.g., family resource centers that provide families with resources to deal with issues such as homelessness, domestic violence, unemployment; programs for parents to learn how to more effectively support their children's learning and their readiness for college and career). Another way is to provide information forums for family and community members on the district's strategy and seek their input in town-hall-style meetings. Leaders in districts that effectively advance equity and inclusion pay attention to and adaptively respond to important tensions experienced by the larger community when intentional efforts are made to enhance equity in learning opportunities and outcomes among different groups of students (Blankstein & Noguera, 2015). This is the case, for example, when some families see increased access to high quality learning opportunities for students of color as a threat to the privileged learning

opportunities of their children. In these cases, districts can take a leading role in listening to and managing such discomfort while forging stronger public support to their agenda.

Some districts have pursued strategic partnerships with businesses to engage high-school students in apprenticeships that simultaneously give them credits for graduation, provide them with exposure, and link them to real-work environments (Burns et al., 2019). Partnerships with external agents may involve collaborating with local universities to embed the district's curricular and instructional strategy in teacher education programs, select and support graduates of these programs to teach in the district, and send teacher candidates to practice alongside expert mentors in the district's schools. Some effective districts report that when they do not have the internal expertise or knowledge to respond effectively, they partner in a strategic and focused way with county offices of education, professional learning associations, community agencies, non-profit organizations, or universities to address identified needs effectively. These partnerships, however, are more often than not sustained engagements, as opposed to short-term arrangements. They are designed with the 'external provider' joining as a learning partner to effectively adapt their expertise to the specific context and culture of the district. At the same time, they build the capacity of the district team to sustain the work over the long run – as opposed to an arrangement where the district delegates the responsibility of designing and delivering programs to the external provider without much active involvement (Burns et al., 2019). Partnerships with community agencies that provide services to families and school-aged children often figure in district partnerships in small rural districts, given the human resource limitations of the local education system and the needs and interests of students that extend beyond academic education (Reading & Walberg, 2012; Rey, 2014). There is emerging evidence that effective district leaders can or do effectively play a proactive role in leveraging and

influencing upward by strategically managing their relationship with the school board and the larger state or provincial education system (Campbell & Fullan, 2019; Fuhrman & Elmore, 1990; Hargreaves & Braun, 2012; Hargreaves & Shirley, 2020).

The relationship between superintendents and school boards is very important. One would say it is a crucial dimension of collaboration and communication in effective districts. The role of school boards in school reform gets mixed reviews. Where school board members are factionalized and embroiled in the conflict amongst themselves and with the superintendent, and where school boards have a history of involvement in decision-making about routine administration of the school district (often described as “micro-management”), and where the members are strongly vested in representing particular constituencies in the district, the portrait of the role of the board in reform is negative. Togneri and Anderson (2003) associated more successful districts with school boards that operate in a policy governance role that emphasizes policy development, goal, and standards-setting, strategic planning, and frequent monitoring of system/school progress in relation to district plans, priorities, and accountability systems. Boards functioning in this mode hold the local chief education officer responsible for routine administration of the system, implementation of system plans, and reporting on progress, but avoid direct involvement in managing the school system. They debate issues, but once decisions are made, they speak with a common voice supporting those decisions. Stability in school board membership and constructive long-term relations with the district administration are also characteristics of these boards (Togneri & Anderson, 2003; Waters & Marzano, 2006). Unfortunately, there is little research from which to generalize the organizational form and role of local government authorities in more effective districts (Usdan & Maeroff, 2010). Conflict and frequent turnover of either local school system governing bodies or the chief education officers of a local education

agency are obstacles to improving and sustaining the quality of teaching and learning. Stability, however, does not guarantee positive collaboration. School boards and district leaders need to work together with unified efforts to create and sustain effective schools (Campbell & Fullan, 2019).

Districts can serve as agents of coherence-making in the larger state or provincial education system. Effective districts engage actively with the external policy and resource context to leverage those influences to strengthen support for the district reform initiatives (Hargreaves & Shirley, 2020; Spillane, 1996; Togneri & Anderson, 2003). To begin with, high-performing districts make deliberate efforts to link their shared purpose with the vision, goals, and strategy of the state or province. They pay serious attention to central government-mandated standards for curriculum content, student, and school performance (Brandon et al., 2015; Burns et al., 2019). Some develop or adopt local standards that raise the bar beyond those set by central government authorities and actively seek comparisons of local performance to relevant external and international standards. The standards and their attainment become synonymous with “success” at the local level. In some districts, commitments to standards extend beyond the curriculum, school, and student results to other components or dimensions of school reform efforts, such as standards for principal leadership and management and effective instruction.

There is emerging evidence of effective districts also taking a proactive role to influence the larger education system at the state or provincial level. Hargreaves and Braun (2012) characterized the role of proactive effective school districts studied in Ontario (Canada) as ‘leading from the middle,’ which involves supporting the schools they serve, connecting and collaborating with peer district leaders, and proactively leveraging and influencing the education system ‘above’ them. The Essential for Some,

Good for All strategy in Ontario offers a good and innovative example of district leaders leveraging an invitation and investment of funding for special education on the part of the provincial Ministry of Education to take a proactive and leading role as a network of districts, to design, implement, test, and share district-wide strategies to enhance learning opportunities and outcomes for special education students.

In this section, we discussed how effective districts go about sustaining an open and collaborative culture. Three key domains of this system practice are listed down in Table 3.

Table 3. Sustain an Open and Collaborative Culture

- *Modeling and cultivating trust and reciprocal accountability*
- *Developing effective collaboration and shared leadership between the central office and schools*
- *Coordinating and collaborating laterally with other districts and upward with the state system*

Promote Systemwide Learning

“Districts, schools, and instructional teams engage in continuous learning through inquiry processes involving formative assessment, thoughtful reviews of data, and ongoing monitoring of agreed-upon actions and their desired outcomes.” (Ohio State Development Team, 2019, p. 25)

Supporting and Modeling Learning

One of the most impactful ways district leaders cultivate systemwide learning across the systems is by taking on the role of *lead learner*, someone who creates the conditions for

others to learn while learning alongside them about what works and what does not (Fullan, 2014). This involves being proactive and selective in supporting the capacity development of their team to undertake the necessary changes or improvements in their understanding and practice to produce the intended results. More specifically, leaders in successful districts see themselves as instructionally engaged. They see their role as supporting the improvement of teaching and learning instead of merely overseeing school buildings, bus schedules, and administrative procedures (Brandon et al., 2015; Burns et al., 2019; Leithwood, 2010; Leithwood & McCullough). The term *lead learner* was originally coined in the effective school leadership studies (Fullan, 2014; Robinson, 2011). However, it has quickly been adopted as a useful term to describe effective district leadership (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016). Many successful districts develop specific strategies to engage district and school leaders in learning about and shaping teaching and learning. While the strategies may vary in name or approach (e.g., walk-throughs, instructional rounds), all involve classroom visits by district and school leaders to observe instruction, not with formal evaluation purposes, but specifically intended to develop common understandings of effective teaching and support the work of teachers in classrooms (Burns et al., 2019; Fullan et al., 2016). This simple yet powerful practice serves several purposes. It signals to schools that the district is serious about placing teaching and learning at the center of its work, helps district and school leaders to develop an orientation towards instruction, deepens their familiarity with and knowledge of effective teaching and learning, and helps build relationships and common understandings with principals and teachers.

Importantly, effective district leaders have learned that providing time and structures for professional collaboration is not enough to improve teaching and learning. As recent research on effective collaboration has made evident, the existence of

structures such as professional learning communities is necessary but not sufficient to change or improve the everyday practice of teachers (Chapman & Mujis, 2014; Hargreaves & O'Connor, 2019; Rincón-Gallardo & Fullan, 2016; Little & Horn, 2007). It is not the existence of structures for professional collaboration, but the nature of the work teachers and school leaders undertake when working together that explains the positive impact – or lack thereof – of professional collaboration on teaching and learning. Effective districts place emphasis on clarifying what effective professional collaboration looks like and supporting school leaders and teachers to learn to collaborate effectively (Burns et al., 2019; Brandon, Hanna & Negropones, 2015; Fullan et al., 2016; Knudson, 2013).

Being a lead learner also involves modeling the very practices of learning that district leaders expect teachers or school principals to adopt and use. Effective district leaders keep a close link between the learning they ask and support others to undertake and the learning they undertake (including in public) to improve their own leadership practice. They emphasize a 'do as I do,' as opposed to a 'do as I say' mode of operation. In a study of six highly successful school districts in the Canadian province of Alberta, all district leaders interviewed mentioned their commitment to getting better at supporting school leaders and teachers to improve teaching and learning, as well as the specific learning opportunities they were accessing and leveraging to become better at leading learning in their jurisdictions (Brandon et al., 2015).

At the most basic level, effective districts support schools to develop their capacity to collaborate and use evidence effectively. This support may include allocating resources to allow teachers the time to meet and work with their colleagues; frameworks or protocols for effective collaboration; training, coaching, or other forms of professional learning for school-based staff to observe, learn and practice effective collaboration. In

the most effective districts, however, collaboration and use of evidence are not simply something that districts expect and support schools to do, but a practice that district leadership teams themselves model in their work. In these districts, leadership teams engage in collaboration and data use similar to what they expect school-based personnel to do. In a broader sense, some of the most effective districts adopt the type of professional practices that they expect from teachers and principals as part of their main activities. Some district leaders and leadership teams, for example, use cycles of collaborative inquiry of a similar nature to those they expect principals and teachers to adopt; others engage in focused collaboration in cross-district networks that are similar to the collaboration in school networks that they encourage and support schools to participate in.

Continuously Testing and Refining a Theory of Action

Five decades of research on the implementation of system reform have offered robust evidence of noticeable gaps between the intent of the reforms and the everyday practice of those supposed to bring it to life in classrooms, schools, and school systems. In the early 1980s, Michael Fullan (1982) argued that behind the massive failure of social policy to produce its intended results was the neglect of the phenomenology of change, that is, how the intended implementers experienced and made sense of the proposed reforms. Many implementation scholars pointed the limits imposed by the *technical-rational* perspective that dominated – and continues to dominate – thinking and action in education reform in North America – a perspective that assumes that the implementation policy and reform can and should travel in a relatively direct line from the central office to schools and classrooms (Datnow & Park, 2009; Mehta, 2013). Paul Berman, one of the key early implementation researchers and theorists in education, argued that the

process of implementing change in schools was more accurately experienced as a process of learning for individuals and organizations involved than as a technical process of putting policies and programs into place. However, that argument did not take hold in the minds of policymakers and school system leaders at the time (Berman, 1981)

A key impulse underlying the technical-rational perspective is *control* and *compliance*: a tendency to treat leadership as a practice of getting others to do as they are told. The first major limitation of the technical-rational perspective is its inadequacy to effectively explain how education reform actually happens – or not (e.g., Berman & McLaughlin, 1976; Tyack & Cuban, 1995; Datnow & Park, 2009). Its second key limitation is the failure of most education reforms to produce their intended results (e.g., Elmore, 1996; Fullan, 2011; Mehta, 2013). In search of more effective approaches to stimulate and support school improvement in education systems, some scholars have looked into education systems that have shown upward trends in student outcomes and sought alternative, more effective ways to think about and pursue improvement in the school systems. The notion of a *learning organization*, first coined by Peter Senge (1990), underlies several of the alternative perspectives used to describe effective school districts' work. A learning organization is an organization intentionally designed to facilitate the learning of its members and continuously transform itself. One powerful way to operationalize systemwide learning is the development and continuous testing and refinement of a theory of action that intentionally links the key strategic actions of the central office with their intended results (Argyris & Schön, 1978; City et al., 2019).

Even though the term is not always explicitly used in contemporary case studies on effective districts, most districts featured in the literature operate as learning organizations. Johnson et al.'s (2015) study of five highly successful American districts highlights the importance of effectively managing the relationship between the central

office and schools, among other things, to allow for the continuous learning of the central office about what is working, what is not, and what can be done differently. The Learning and Policy Institute study on seven positive outlier districts finds that these districts were deliberate about taking an iterative approach to improving student learning, which is constantly refined based on feedback and input from implementation (Burns et al., 2019). Michael Fullan defines an effective change process, including in districts, as one that involves shaping and reshaping good ideas while building ownership and capacity of all members of the school and district community (Fullan, 2019; Fullan & Gallagher, 2020).

Systemwide learning, one of the four key system practices of Moving Your Numbers, is in line with the overall notion of a district as a learning organization, a key dimension of the principle and practice of reciprocal accountability amongst all participants in the district for their role in contributing to system performance. It involves embarking on intentional work to develop a systemwide culture of continuous learning and improvement across the entire district. While methods and questions guiding case studies on effective school districts vary widely, there are important commonalities in some of the key practices undertaken by district leaders and their teams to promote a culture of systemwide learning, which include:

- Supporting and modeling the type of learning and collaboration expected from teachers and school leaders.
- Collecting, examining, and making readily available to teachers, school and district leaders useful data on student learning, teacher practice, and (when available and relevant) other aspects that are relevant to the improvement of learning, equity, and wellbeing.

- Engaging in a continuous iterative process of collaborative examination and improvement of system coherence.

Using Evidence for Reciprocal Accountability and Improvement

The research on effective and less effective data use in schools and districts and ways that school districts can strengthen the quality of data use at both the district and school levels to improve school decision-making and planning is voluminous and more than we can comprehensively review here (Schildkamp, 2019). For our purposes, however, it is important to note that district-level use and support for data use in schools is a recurrent feature of effective district leadership (e.g., Togneri & Anderson, 2003; Ikemoto & Marsh, 2007; Anderson et al., 2010). There can be a high degree of variability in the level of complexity of data types and data analysis employed by district leaders and school personnel in the use of data to inform improvements in teaching and learning. A key dimension of variability is the extent to which data of different kinds are being used mainly to identify problems, or whether they are also being gathered and used to understand the causes of the problems and aid in solving the problems. Researchers have identified conditions likely to support data use, including: accessibility and timeliness of data, perceived validity of data, staff capacity and support for considering data, time to interpret and act on evidence, partnerships with external expertise in analyzing data, tools for data collection and interpretation, and the presence of an evaluation habit of mind as a norm of organizational culture and professional practice (Ikemoto & Marsh, 2007; Anderson et al., 2010). Many of these conditions are more susceptible to influence at the district level than at the level of individual principals due to technical complexity, resource requirements, and policy constraints.

Successful districts support educators in collecting, analyzing, and using evidence to inform decision-making around teaching and learning, and more broadly, around providing access to high-quality learning opportunities to diverse students (Burns et al., 2019; David & Talbert, 2013; Fullan et al., 2016; Shannon & Bylsma, 2004). Districts can provide data to schools, support them to use it effectively, and create opportunities for collaboration focused on examining and refining teaching and learning in light of the available evidence (Leithwood, 2010; Leithwood & McCullough, 2017). Effective districts invest considerable human, financial, and technical resources in developing their capacity to assess the performance of students, teachers, and schools and to utilize these assessments in the decision-making process regarding needs and strategies for improvement, and progress towards goals, at the classroom, school, and district levels. The major common focus is on gathering and interpreting student assessment data, including results of state and district standardized testing programs, district endorsed diagnostic assessment processes, and student work samples, in relation to state and district standards and expectations for curriculum and learning. Many districts broaden the collection and use of data to other indicators of student performance (e.g., attendance, discipline, retention, graduation) and school or teacher performance (e.g., parent and student satisfaction surveys). Research on data use in schools and school districts highlights that those most effective in their use of data incorporate formal data (i.e., standardized test data, student progress records, surveys) with more informal data based on systematic (not merely anecdotal) observation and professional judgment (Datnow & Park, 2019; Hargreaves & O'Connor, 2019; Sharratt & Fullan, 2012; Wohlstetter et al., 2008).

It is important to recognize that many recommendations for district leader action are drawn mostly from research that has relied on improved academic outcomes for

students (e.g., standardized test performance, graduation rates, college readiness indicators) for which measurable indicators are relatively well known and accessible. The broadening of student learning goals to other domains, such as socio-emotional learning (or well-being), reasoning skills, and non-academic dimensions of student development (arts, citizenship), represents a challenge for all educators. The means for assessing achievement and progress towards these goals are not so well in hand. This presents an opportunity for school district personnel to innovate internally and collaborate externally in the systemwide search for ways to effectively and practically assess equity, quality, and progress in student learning in those areas.

One example can be found in California, a state that seven years ago adopted and initiated the development of a multiple-measures accountability system in a deliberate effort to move away from the single-measure accountability system that had been used since No Child Left Behind. Positive outlier districts in states like California have leveraged this move away from a single-measure accountability system to use multiple sources of data and evidence about students' needs, behaviors, and outcomes across academic, social, and emotional domains. (Burns et al., 2019). In districts like these, data and evidence are not only used to improve classroom teaching and learning but also to identify students in need of other kinds of supports and to evaluate the district's programs and interventions (Brandon et al., 2015; Burns et al., 2019; Johnson et al., 2015; Fullan et al., 2016).

Successful districts work to ensure that schools have timely and easy access to relevant evidence of student and school performance and, when available, of their academic and social development and needs. In many cases, they work with school-based leaders to develop interim assessments that allow teachers and school leaders to collect and analyze 'lead data' – evidence of student learning and teacher practice that

can be used to make timely adaptations and decisions to improve the opportunities to learn for students – as opposed to ‘lag data’ – data that arrives at the end of or after the school cycle when it is too late to make changes that could benefit the students whose data is reported. Some integrate formative assessments of student learning into standardized curriculum programs aligned with external accountability systems so that teachers’ interim tests of student learning do not occur as an add-on and serve the dual purpose of checking student progress and strengthening accountability outcomes (Johnson et al., 2015; Zavadsky, 2009).

Educators in these districts routinely justify their actions and goals for improvement from an evidence-base of student learning data. The accountability systems are created not only to gather and provide information on student, teacher, school, and district performance for planning but also to hold educators at all levels of the system from the classroom to the boardroom jointly accountable for progress towards a standards-aligned system and school goals aligned with the standards (Burns et al., 2019; Zavadsky, 2009, 2016). Principals bear considerable responsibility for school and teacher performance and ultimately for student results in their buildings. But effective school districts also hold themselves publicly responsible for results in schools, using the evidence on student and school performance not simply to evaluate schools or principals but to assess the district’s own strategy (more on this below) (Fullan et al., 2016; Johnson et al., 2015). Another use of evidence in effective districts concerns the search for solutions and the design of strategies to address identified challenges affecting student learning, wellbeing, or equity (Burns et al., 2019). Many districts featured in the literature select or design ‘evidence-based’ solutions, that is, solutions that research or teacher expertise suggest can positively impact student learning, wellbeing, or equity. And they encourage or require schools to do the same (Burns et al.,

2019; Westover, 2020). In the most sophisticated cases, however, evidence-based approaches to instruction are not simply adopted without question. Instead, teachers and principals are encouraged to treat these as approaches that might work in their particular context and with their particular students and regard them optimistically as “promising practices” rather than “best practices.” The selected approaches are tested in practice, their results monitored, and either rejected or further refined through continuous cycles of collaborative inquiry (Donohoo & Katz, 2020).

Districts that have been effective at closing gaps in learning outcomes and opportunities collect evidence of student outcomes and learning conditions disaggregated by categories often associated with inequity in educational opportunities (e.g., race, ethnicity, special needs status, socio-economic status). This often involves intentionally and systematically looking at evidence that district administrators would prefer not to see or make public, a practice that Noguera and Blankstein (2015) refer to as “facing the data and your fears” (p. 203). But collecting data on equity in student outcomes and learning opportunities is just an initial step. Districts that place equity at the center of their work use the data to drive decisions to address unequal access to high-quality education opportunities. They provide support for teachers and school leaders to effectively support the learning and wellbeing of diverse children. Differentiated instruction, culturally responsive pedagogies, trauma-informed teaching, and restorative justice are some of the most prominent approaches districts select to foster equity and inclusion in teaching and learning and promote positive learning environments in districts that prioritize equity and inclusion.

Bryk and colleagues (2015) proposed that *focusing on variation in performance* is one of six key principles of effective collaboration and inquiry in what they call networked improvement communities. In districts that effectively close gaps in learning

opportunities and outcomes between different student groups, variation in performance is a key area of focus in the collaborative work of teachers, school leaders, and district leaders. When looking at differences in outcomes between student groups, leaders in effective districts support and encourage school-based personnel to focus their examination of the variability in their practice and on what is within their realm of influence. They also routinely practice what they preach. That is, district leaders themselves examine, refine, and change their leadership practice in light of evidence of inequities in learning opportunities and outcomes (Burns et al., 2019; Blankstein & Noguera, 2015).

The full realization of equity and inclusion in teaching and learning goes beyond learning and adopting specific classroom practices or techniques. At deeper levels, it also includes adopting what Hargreaves and Braun (2012) called responsive diversity practice, which involves: i) *demographic empathy*: being proactive about developing empathy towards students from historically marginalized groups by investing time and effort in getting to know their culture and traditions in some depth, as well as adopting an asset-based approach to how children from these groups are seen and treated in classrooms and schools; ii) *inclusive assessment*, which involves diversifying the means for students to demonstrate their learning and skills; and iii) *collective responsibility*, which is about cultivating a sense of shared responsibility to enhancing the learning opportunities and outcomes of all students. The Essential for Some, Good for All (ESGA) district-led strategy to enhance equity in learning opportunities and outcomes among special education children and youth in Ontario offers multiple illustrations of responsive diversity practice developed by school districts with high levels of socio-economic, racial, and ethnic diversity (Hargreaves & Braun, 2012).

There is emerging evidence suggesting that districts that effectively advance equity in learning opportunities and outcomes for diverse student groups are proactive about addressing and mitigating some of the challenges students face outside of school. In states or provinces where multiple measures of student needs, behaviors, and outcomes are being collected and used statewide as part of a multi-measures accountability system, positive outlier districts use these multiple sources of evidence to also identify students in need of additional support and to develop targeted interventions and multi-tiered systems of support that encompass both academic and social and emotional learning (Burns et al., 2019). Academic supports include strategies for accelerated mastery of literacy for English learners, adopting assistive technologies to support access to and communication of information by special education students, as well as integrating English language learners or special education students into mainstream classes (Burns et al., 2019; Hargreaves & Braun, 2012). Social and emotional supports include social-emotional learning programs, wraparound services for health, mental health, counseling, and other social services. (Brandon et al., 2015; Burns et al., 2019). Just as with academic support programs, effective districts are deliberate about identifying and adopting strategies for behavioral and social-emotional learning that are backed up by evidence of their effectiveness (Burns et al., 2019)

Effective districts committed to equity identify district and school practices, norms, or structures that produce unequal learning opportunities and outcomes among groups of students, design strategies to change or remove them, monitor the impact of these changes, and adjust or refine the strategy over time based on evidence of its impact or lack thereof (Blankstein & Noguera, 2015; Burns et al., 2019; Hargreaves & Braun, 2012). In the networked improvement communities approach to improvement, this is called *seeing the system that produces the outcomes*. In at least some of the

districts featured in case studies, the examination of unequal learning opportunities and outcomes among student groups is not limited to examining and changing the pedagogical practices of teachers but also to identifying and addressing structural changes that constrain the learning opportunities of students from historically marginalized groups (Blankstein & Noguera, 2015; Burns et al., 2019).

Finally, a distinctive marker of some of the most effective districts is their use of evidence to evaluate *their own strategy and practice*, rather than just the students, teachers, or school leaders in the system. Leadership teams in these districts look at the evidence of impact – or lack thereof – of their improvement strategy to examine what it is that they – not others – are doing or not doing that is producing such evidence. They use evidence of impact as a mirror of their leadership practice, which allows them to identify gaps or flaws in their strategy, design solutions that address them, and iteratively and continuously develop increasingly precise and more fine-tuned strategies to support and enable school improvement. (Brandon et al., 2015; Burns et al., 2019; Fullan et al., 2016; Johnson et al., 2015)

In summary, effective districts operate as learning organizations, that is, organizations intentionally designed to facilitate the learning of their members to continuously transform themselves. They do so by: supporting and modeling learning and collaboration in schools and across the district; continuously testing and refining a theory of action that intentionally links the districts' vision, goals, and strategic actions with their intended effects on teaching and learning; and supporting and modeling the collection and examination of useful data on student learning, teacher practice and other aspects relevant to the full realization of learning, equity, and wellbeing. Table 4 outlines three key domains of the larger system practice of Promoting Systemwide Learning.

Table 4. Promote Systemwide Learning

- *Supporting and modeling effective professional learning practices and mindsets* expected from educators at the district, school, and classroom levels.
- *Using evidence and collaborative inquiry to continuously test and refine a theory of action* that links the district’s vision, goals, and strategic actions with intended results.
- *Using evidence of student learning, teaching, learning conditions, and leadership practice to hold school and district leaders reciprocally accountable* for their role in improvement.

Section III. Principles of Learning

In the previous section, we presented an overview of what the specialized literature has to say about the *what* and the *how* of effective district leadership. We have treated the four OLi-4 district practices as the *what* and described in some detail the *how*. In this section, we focus on how district leaders can learn to lead more effectively. That is, how and under what conditions they are more likely to fully embrace the four MYN strategies and leverage them to more effectively lead improvement in schools and across the system. Most of the literature on district leadership of the past few decades examines the practices and strategies of district leaders as they occur when the studies are conducted. While this literature may include some glimpses into how these leaders learn to lead the way they do, little is known about the forms of professional learning that are more likely to help district leaders learn to lead more effectively (Honig, 2013b). This relative gap in the literature should come as no surprise, as only recently have educational systems – and only a handful so far – paid explicit attention to and sought to

cultivate the role of district leaders as learners (Honig & Rainey, 2020b; Goldring et al., 2018; Weber & Mardhani-Bayne, 2018).

This being said, existing knowledge on effective professional learning for teachers and school leaders, the little available evidence of effective professional learning for district leaders, and more broadly what is currently known about how and why adults learn to do things differently can provide helpful guidance in identifying key principles of learning that could be leveraged to design a professional learning strategy for district leaders with good chances of success. From our review of the literature on effective professional learning and our broader understanding of adult learning, we have distilled six principles of learning that could orient the design of a professional learning program for district leaders. These principles of learning are consistent with the delivery model adopted for the OLi-4 professional learning strategy for principals, coaches, and superintendents, which includes relevant content, cohort model, opportunities for practice, coaching, and opportunities for reflection (OLi-4, 2016).

Leverage and Spark Intrinsic Motivation

Seymour Sarason (2004) argued over a decade ago that, of all the variables linked to learning in schools, the most crucial and elusive is *wanting to learn*. After all, once internal motivation is in place, a learner is more likely to put in the necessary effort and persistence to develop mastery, more open to making mistakes and learning from them, more inclined to pursue, pay attention to, and incorporate feedback.

Almost invariably, leaders in the most effective districts demonstrate high levels of intrinsic motivation to continuously get better at what they do. But it cannot be assumed that every district leader necessarily has high levels of intrinsic motivation to change or

get better at their own practice. It is reasonable to expect that some ways in which effective professional learning for teachers and principals leverage and spark intrinsic motivation can also be helpful to the purpose of supporting the learning of district leaders. These include:

- Facilitating processes of connection between the system priorities and the personal and collective purpose of participants. (Connecting the larger learning goals and priorities of the system with the personal and collective *why* of participants).
- Allowing participants to choose the challenge or area of work they are interested in addressing when putting into practice the ideas or principles of action being learned.
- Creating/facilitating multiple opportunities for participants to witness examples of mastery of the skills/knowledge they are developing over time.
- Facilitating focused collaboration and networking between peers to develop a shared responsibility in learning to lead more effectively.

These approaches to professional learning are consistent with what is known about intrinsic motivation. A review of self-determination theory and its proponents (Pink, 2011; Ryan & Deci, 2000) yields at least four drivers of intrinsic motivation: purpose, autonomy, mastery, and connectedness.⁵ We do what we do with the full intention and focus when learning and doing things that matter to us (purpose), with freedom and flexibility to decide what, how, when, and with whom to do it (autonomy), getting better over time (mastery), and doing it with others (connectedness). Each of the

⁵ These four drivers of intrinsic motivation are extracted from Richard M. Ryan and Edward L. Deci's (2000) Self Determination Theory and Daniel Pink's (2011) take on such theory. The three determinants of intrinsic motivation in Deci & Ryan's Self Determination Theory are Autonomy, Competence (which I refer to as Mastery) and Relatedness (which I refer to as Connectedness). Pink's three drivers of intrinsic motivation are Purpose, Mastery, and Autonomy.

abovementioned approaches can be easily linked to these four drivers – in the same order as listed.

Grant Exposure to Masterful Leadership Practice

Exposure to the masterful practice is a key enabling condition for learning it. The emerging science of social physics (Pentland, 2014) has demonstrated that social interaction has a far more powerful influence on individual behavior than was once believed. The likelihood that we adopt a new behavior – everything from our diet, to exercising, to wearing a helmet while riding a bike, to adopting green technologies – is a direct function of the degree to which people around us exhibit such behavior. Some of the mechanisms through which professional learning opportunities for superintendents and other central office administrators may provide exposure to masterful leadership practice include: professional collaboration with peers, school visits, case studies (videos, publications), coaching. Exposure to expert district leadership practice could range from shadowing a district leadership team over an extended period to see them lead in action to more discrete ‘demonstration’ of a specific practice by a coach, a peer, or an external expert – in the context of a broader cycle of theory-demonstration-practice-feedback identified as key components of effective staff development (Joyce & Showers, 1980). The learning potential of case studies and videos to provide vicarious experiences of mastery is enhanced when learners are provided frameworks to orient what they see/hear to relevant features of the cases and videos and to help avoid rejection of those learning materials because of perceived differences from local contexts.

Facilitate Continuous Practice

Practice is the third key condition for powerful learning. The 10,000-hour rule attributed to Anders Ericsson and popularized by Malcolm Gladwell (2008) proposes this is the number of hours of deliberate practice that are required to gain mastery of a specific skill or domain. While some have criticized this rule as too simplistic and inaccurate (MacNamara et al., 2014), deliberate practice continues to be regarded as a crucial vehicle to mastery (Ericsson & Pool, 2016).

Almost invariably, effective professional learning for educators and school leaders includes opportunities for participants to put into practice the theory and ideas delivered in training sessions. This transfer of training into practice in regular work settings may include adaptations to the original practice to ensure fit to varied contextual conditions (Joyce & Showers, 1980). Extended periods to allow participants to engage with and incorporate into regular practice the content offered through professional learning opportunities are an important feature of effective professional learning (Timperley et al., 2007). It is reasonable to expect that periodic professional learning opportunities designed so that participants leave each session with a clear sense of and commitment to trying out specific habits, strategies, or approaches to leadership in their professional setting, and are expected to give account (to their peers, to a coach, or an external consultant) of what they've done and the results of their actions help consolidate the learning of district leaders and enhance their leadership practice.

Practice and Promote Feedback

Feedback and reflection are key to learning as well. Learning requires access to sources of information that allow us to know how well we're doing, what we're yet to learn, and

what we need to change, refine, or stop doing. In the relative simplicity of feedback (it comes down to talking with honesty, candor, and care about each other's practice) lies an untapped source of renewal for the education sector.⁶ Giving and receiving feedback, however, is difficult. Opening the professional practice of teachers and leaders to scrutiny can be scary and overwhelming. Formal mechanisms intended to serve as feedback, such as formal evaluations and appraisal, often have the opposite effect: they shut people off rather than opening them up to learning and growth.

Fullan (2015b) identifies five core conditions necessary to create organizational cultures where feedback is encouraged, welcomed, and used by all: 1) An overarching and an inspiring sense of purpose; 2) Quality relationships; 3) Good, transparent evidence of impact; 4) Candor of feedback infused with a developmental purpose; and 5) Respect for autonomy. In addition to creating organizational cultures where feedback is routinely used, it is also important to ensure that the feedback is good. Good feedback requires developing a common, increasingly precise language that describes the actual tasks that we observe others doing with as much detail and clarity as possible. Only *after* articulating a precise description of what we observe comes *analysis* – breaking down observations into categories that help explain the nature of the observed practice. Next comes *prediction*: What should we expect be the results or impact of the observed practices? If you were on the receiving end of the leadership practice(s) just observed, what would you learn how to do? What would you learn about the organization, its purpose, or its strategy? And only after description, analysis, and prediction, comes

⁶ A few good resources about the practice and culture of good feedback are: Fullan, M. (2015) "Feedback". In *Freedom to Change: Four strategies to put your inner drive into overdrive*. Chapter 4 (pp. 67-98). San Francisco, CA: Jossey-Bass; Lemov, D., Woolway, E., & Yezzi, E. (2012) "Feedback." In *Practice Perfect: 42 Rules for Getting Better at Getting Better* (pp. 107-138). San Francisco, CA: Jossey-Bass. And Stone, D., & Heen, S. (2014) *Thanks for the Feedback*. New York, NY: Viking.

evaluation: How deep is the leadership practice just observed? What is the next level of work for the practice you just observed? (City et al., 2009).

Coaching and communities of practice can serve as venues where district leaders give and receive feedback. But external expertise is often required in contexts where participants are unfamiliar with or resistant to feedback. External expertise can serve to break down some of the social patterns that maintain the status quo and to model and establish new habits and routines around feedback (Honig & Rainey, 2020a; Timperley et al., 2007)

Stimulate Reflection

Feedback alone is not enough to support improvement. It requires the learner's active engagement with such information and intentional reflection over whether, how, how much, and how well one is learning (Fullan, 2015b; Stone & Heen, 2014). Furthermore, a reflection that is conducive to improvements in leadership practice has to address two crucial aspects. First, it should help clarify whether, to what extent, and how the leader's actions stimulate, support, or discourage desired improvements in teaching and learning. Reflection should help district leaders understand with increasing clarity the causal pathway between their actions and teaching and learning. The influence of district leaders on the pedagogical core is necessarily indirect. Yet, when leadership is effective, this influence is intentional (Fullan & Gallagher, 2020; Rincón-Gallardo, 2019; Robinson, 2011). Theories of Action represent a specific tool for organizational learning that might help clarify, design, and continuously refine an increasingly precise and impactful strategy to improve teaching and learning in districts (Argyris & Schon, 1978; City et al., 2009). Put succinctly, a theory of action is a statement or series of interconnected statements that link intentional, strategic actions with their intended results. A good

theory of action has three key characteristics: 1) it treats actions as *causes* and results as *effects*; 2) it is empirically falsifiable – that is, it can be put to the test in practice and confirmed or rejected based on the results; and 3) it is open ended – it can and should be continuously revisited and refined based on examination of the impact of strategic actions.

Another crucial focal point for reflection in effective professional learning is prevailing discourses, beliefs, and assumptions. The most effective forms of professional learning actively and continuously engage participants in the process of identifying, reflecting on, and shifting beliefs or assumptions that are problematic – e.g., the belief that some groups of students or adults are not as capable of learning or worthy of support as others. The challenge to problematic discourses typically involves iterative cycles of thinking about alternatives and becoming aware of improvements in teaching or learning that result from changed leadership approaches (Honig & Rainey, 2020; Timperley et al., 2007). In some cases, it also involves linking leaders with colleagues leading districts that serve similar student populations with similar teaching and school leadership workforce and are obtaining remarkably better results in student learning (Look for references to Ontario strategy, “statistical neighbors”). Use and continuous engagement with a theory of action can also unearth, examine and change implicit assumptions about the link between our planned actions and their intended results. The process of continuously examining whether and to what extent the strategic actions of district leaders have the intended effects provides good opportunities to question the assumptions of the strategy designers about how and why the chosen actions will produce the intended results.

Reflection of the kind just described can be facilitated through peer coaching or expert coaching (Joyce & Showers, 1980). Peer coaching can be helpful to the extent

that it's not just the blind leading the blind (Showers, 1985). Expert coaching can sometimes be replaced with cognitive coaching, a form of coaching that does not require the coach to be an expert in the practice, just an expert in asking probing questions to stimulate reflection and further learning (Garmston et al., 1993).

Enable Peer Learning

Learning alongside others facilitates learning. The role of collaboration in fostering and enhancing learning has been well documented in studies that describe and examine the practices and outcomes of effective communities of practice (Datnow & Park, 2019; Little 1982), as well as on the causal effects of patterns of social interaction on the productivity and creativity of organizations and teams (Pentland, 2014). Furthermore, nearly all cases of effective professional learning for teachers and school leaders that have been documented include participation in some kind of community of practice (Honig & Rainey, 2020a; Timperley et al., 2007). The existence of instances for collaboration, however, does not guarantee significant learning or improvement. There are indeed several documented cases of collaboration that are inconsequential or ineffective, which mainly maintains the status quo and stifles innovation and learning (Chapman & Mujs, 2014; De Lima, 2010; Hargreaves & O'Connor, 2019; Rincón-Gallardo & Fullan, 2016). When it comes to improving teaching and learning across an entire educational system, it is not the existence or the creation of networks per se that matters but *how they function* and *what they do*. The past decade has seen a growing interest and increased knowledge on effective collaboration (Bell et al., 2006; Donohoo, 2016; Earl & Katz, 2005; Hargreaves & O'Connor, 2019; Rincón-Gallardo & Fullan, 2016), which provides more specific guidelines for effective collaboration. Some of the key features of effective collaboration in education identified in the literature include: i) a focus on intentionally influencing the pedagogical core; ii) a culture of trust and internal accountability; iii) the

use of specific protocol and practices of collaborative inquiry; iv) distributed leadership; v) frequent interaction internally and constant connection outwards; vi) resources (Rincón-Gallardo & Fullan, 2016)

Bringing it All Together

In this review, we have distilled key features of effective district leadership, grounded on recent available literature on the topic, as well as the authors' own experience working and consulting with districts in North America and abroad. We have attempted to describe the *what* and *how* of effective district leadership presented here in ways that are relevant and applicable to districts of diverse sizes and contexts. For each of the four system practices of Moving Your Numbers, we offered three domains of practice that may provide an initial structure to the Ohio district leaders' practice profile and professional learning program (Table 5). Furthermore, we have proposed six learning principles to orient these efforts to enhance the chances that they translate into changed and improved leadership practices of district leaders. These principles of learning are:

- i) Leverage and Spark **Intrinsic Motivation**
- ii) Grant **Exposure** to Masterful Leadership Practice;
- iii) Facilitate Continuous **Practice**
- iv) Promote **Feedback**
- v) Stimulate **Reflection**
- vi) Enable **Peer Learning**

We look forward to working with leaders from the Ohio Department of Education and partner organizations to design a strategy and tools for the professional learning of district leaders in Ohio.

District Leadership: Essential Practices and Domains of Action

Prioritize Improvement of Teaching and Learning

- *Developing a clear vision and a small number of ambitious goals for powerful learning and effective pedagogy for all students, placing these at the center of the district's improvement strategy.*
- *Developing a theory of action that links strategic actions of the central office with the district's vision and goals for quality and equity in teaching and learning.*
- *Developing coherence in the district's human and resource capacity and strategies to address the district vision, goals, and theory of action to improve teaching and learning.*

Build Capacity through Support and Accountability

- *Developing evidence-informed strategies to attract, support, and retain highly qualified teachers, school leaders, and district leaders.*
- *Developing capacity for inclusive instructional leadership at school and district levels grounded in evidence of student learning and professional practice, and differentiated in light of school contexts and needs.*
- *Supporting the development of cultures of effective collaboration to examine and improve learning, teaching, and leadership practices in light of the evidence of student learning and professional practice;*

Sustain an Open and Collaborative Culture

- *Modeling and cultivating trust and reciprocal accountability.*
- *Developing effective collaboration and shared leadership between the central office and schools.*
- *Connecting and collaborating laterally and upward with the state system.*

Promote Systemwide Learning

- *Supporting and modeling effective professional learning practices and mindsets expected from educators at the district, school, and classroom levels.*
- *Using evidence and collaborative inquiry to continuously test and refine a theory of action that links the district's vision, goals, and strategic actions with intended results.*
- *Using evidence of student learning, teaching, learning conditions, and leadership practice to hold school and district leaders reciprocally accountable for their role in improvement.*

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