

TRANSFORMING EDUCATIONAL SYSTEMS TOWARD CONTINUOUS IMPROVEMENT

A Reflection Guide for K–12 Executive Leaders



Christina J. Dixon and Simone N. Palmer

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INTRODUCTION

Educators across the country are working hard to provide students with an excellent education. Many take on district leadership roles because they are deeply committed to a vision of success for all students within their school systems. These leaders are driven by a moral imperative to eliminate disparities in achievement and to turn the tide toward equity in educational outcomes—closing gaps while improving the performance of all. They want to see every one of their students walk across the graduation stage with the skills and knowledge needed to thrive in the post-secondary path of their choice.

Educational leaders, however, are also faced with the reality of a "systemic denial of opportunity across generations of Americans based on their class, race, geographic location, gender or national origin." The impact of disparities in access to secure food and shelter, safe neighborhoods, basic healthcare, and community resources is compounded by high teacher turnover, organizational dysfunction, and unequal

These leaders are driven by a moral imperative to eliminate disparities in achievement and to turn the tide toward equity in educational outcomes.

funding within high-needs districts. Especially affected are children of color who are approximately three times more likely to live in impoverished circumstances and more than five times more likely to attend a high-poverty school than white children.²

Current leaders have inherited school systems that are not designed to support every child's academic success. Furthermore, the traditional approach of implementing discrete, isolated initiatives within a culture of compliance has proven inadequate to Executive leaders ...
must catalyze profound
cultural shifts across their
organizations, moving away
from expecting those doing
the work to comply with topdown directives and toward
cultivating people's sense of
agency to solve problems and
make improvements aligned
with their district's vision.

the task of redesigning school systems for higher performance and equitable outcomes.

Amid all of these contextual challenges, however, there is a small group of pioneering educational executive leaders^a who are transforming their districts to meet 21st century demands.³ They are learning how to orchestrate rapid learning while also working in partnership with local communities to improve all facets of their organizations, with the goal of accelerating progress toward closing the chasm between high aspirations and the capacity of their districts and communities to meet them. They provide encouraging examples for their peers who seek to do the same.

Fundamentally, these leaders recognize that schools and districts must move away from initiative fatigue and toward building the capacity to function

a Usually superintendents in school districts or CEOs of charter school networks.

as relentless learning organizations.^b They have embraced the systematic development of everyone's capability to rapidly learn as their primary strategy for achieving their district's vision. Many of these executive leaders have leveraged learning from the healthcare and business sectors, which have longer histories of pursuing system-wide, continuous improvement.⁴ These leaders have essentially become architects of their district's transformation, guiding the development of the organizational culture, systems, and capacities to support this strategy.

In order to lead the transformation of their organizations into ones that are capable of continuous improvement, executive leaders must challenge the conventional ways of thinking, behaving, and working that have characterized schooling in America for decades. They must catalyze profound cultural shifts across their organizations, moving away from expecting those doing the work to comply with top-down directives and toward cultivating people's sense of agency to solve problems and make improvements aligned with their district's vision. This includes working toward creating schools and districts characterized by high expectations for staff rather than acceptance of the status quo as inevitable. Simultaneously and importantly, leaders must create

b By learning organization, we mean, "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights." Garvin, D. (1993). Building a Learning Organization; *Harvard Business Review*, Jul-Aug. Retrieved from https://hbr.org/1993/07/building-a-learning-organization.

c The IHI Psychology of Change Framework to Advance and Sustain Improvement argues that "activating people's agency" is essential to successful improvement efforts. In this context, agency is defined as the power to act with purpose combined with courage, or "emotional resources to choose to act in the face of challenge." Hilton, K., & Anderson, A. (2018). IHI psychology of change framework to advance and sustain improvement. Boston, MA: Institute for Healthcare Improvement.

an environment of psychological safety^a rather than defaulting to individual blame for systemic problems. And there must be a methodology for meeting expectations to avoid "miracle goals and no method."⁵

Such transformation also requires that leaders engage the community so that they can more deeply understand the students, families, and community they seek to serve and develop the cultural competence to operate in truly user-centered ways. Districts need to be responsive to the concerns of the community and work alongside parents and community members to do improvement *with* them rather than *to* them. This work involves having the humility to listen deeply to diverse voices; bridging racial and socio-economic divides; and recognizing and building on the strengths, experiences, and resources that already exist within communities.

Superintendents in such districts further recognize that the combination of leadership through top-down mandates and the loosely coupled structure of school systems hampers the kind of cooperative problem solving that is essential to improving complex systems such as education. They see that operating in siloed departments in central offices and schools must give way to working collaboratively within and across organizational levels. Further, teachers need to have the time and support outside of their classroom walls to work with colleagues to improve their individual and collective practices. Leaders of transformation understand that they must focus their efforts on

While executive leaders are not solely responsible for enacting these changes, how they use their own time and their district's finite resources can have tremendous impact on their organization's and community's capacity to produce successful outcomes for all students.

breaking down institutional and social barriers and fostering the development of system-wide capability.

Enacting this type of transformation is extraordinarily difficult and requires years of relentless effort, but it can be done. Educational organizations that have successfully undergone such transformation have demonstrated that the executive leader functions as a powerful catalyst for systemic change. There is promising evidence that leaders can advance transformation through adopting specific ways of thinking and acting in their daily work, and making strategic use of the levers of transformation that they have at their disposal. While executive leaders are not solely responsible for enacting these changes, how they use their own time and their district's finite resources can have tremendous impact on their organization's and community's capacity to produce successful outcomes for all students.

This Reflection Guide provides a summary of what is currently known about how system-level leaders can

a Psychological safety is "a belief that one will not be punished or humiliated for speaking up with ideas, questions, concerns or mistakes." This type of safety is an essential foundation for effective teams. Edmondson, A.E., & Lei, Z. (2014). Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct. Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 23-43.

advance the essential work of continuous improvement.^a It is offered as a complement to the extant general and educational leadership literature. As such, it endeavors to represent the early learning of those leaders pioneering transformational change in order to develop the system-wide capacity for continuous improvement in education. Recognizing that our learning about how to advance this work continues to evolve, the Carnegie Foundation offers this Reflection Guide as both a tool to support leaders as well as an invitation to engage in conversation and learning.

This guide describes the **key dispositions**, **core practices**, and **levers of transformation** used by executive leaders, and within each category, it identifies vital elements of successful executive leadership of such a transformation. Each element includes a description accompanied by an illustration drawn from the experience of an executive leader. Some of these elements may be familiar, but others are likely to be new or offer "stretch goals" for leadership practice. Few leaders in our field routinely incorporate

Recognizing that our learning about how to advance this work continues to evolve, the Carnegie Foundation offers this Reflection Guide as both a tool to support leaders as well as an invitation to engage in conversation and learning.

all elements into how they lead, and learning to lead improvement, like improvement itself, is a neverending journey. For this reason, each category concludes with questions to stimulate reflection and deeper learning to support leaders in self-discovering opportunities for changing their own thinking and behavior to advance continuous improvement in their own contexts.

a This Reflection Guide summarizes the findings of a project of the Carnegie Foundation to understand how executive leaders in education transform their organizations to be capable of producing new levels of system performance through the use of improvement science principles. To conduct this inquiry, we scanned extant literature; interviewed leaders, researchers, and consultants from education, healthcare, and business with expertise related to leadership for system-wide continuous improvement; and then tested initial framework prototypes with scholars and practitioners to revise and improve the final product. Please see Appendix A: References and Sources at the end of this document for a full list of the resources and people consulted.

KEY DISPOSITIONS

Transformational efforts require leaders to consistently think and act in ways that drive continuous improvement across an entire organization. Cultivating key improvement dispositions enables leaders to recognize not just when they need to act, but to also feel inclined and able to take that necessary action. In addition, it is only through their own self-development that they are able to foster these improvement dispositions in the organization. These ways of thinking and deeply held beliefs guide how transformational leaders approach their work. Such leaders adopt the following key dispositions:

GROWTH MINDSET

CURIOSITY, HUMILITY, AND VULNERABILITY

WELCOMING UNCERTAINTY

SCIENTIFIC REASONING

SYSTEMS THINKING

GROWTH MINDSET

"If you don't have a growth mindset as a teacher or as a principal or as a district leader, continuous improvement is not going to happen."

Lawrence Nyland, Superintendent Emeritus, Seattle Public Schools

A growth mindset is the belief that you and everyone in your organization are able to learn and grow through dedication and hard work. Executive leaders of transformation expect that, with the right experiences and support, everyone in the organization is capable of developing the knowledge, skills, and capabilities to improve their work in support of the organization's improvement efforts. A belief that every individual in their organization is a valuable and contributing member of the improvement is critical to leaders' engagement and capacity-building of those closest to the work.

CURIOSITY, HUMILITY, AND VULNERABILITY⁸

"I'm ... concerned that as this continuous improvement movement grows, that we need to ensure that superintendents are committing to taking a learning stance that is characterized by a humble mindset, rather than simply using their role to create senior level positions around continuous improvement and then claiming that they're committed to the work."

Jorge Aguilar, Superintendent, Sacramento Unified School District

Curiosity, humility, and vulnerability are foundational to the learning that transformation requires. Leaders with curiosity are genuinely interested in how and why things work, and are willing to think deeply about a problem before considering solutions. When they act with humility, they are open to being wrong and can recognize that all improvement knowledge is provisional and subject to change with new learning. Leaders with vulnerability do not fear failure, and they are willing to take risks and learn in public. Taken together, these dispositions comprise a learning stance that enables leaders to promote an organizational culture necessary for continuous improvement.

WELCOMING UNCERTAINTY

"I used to think it was all about knowing ... Now I know that it's all about learning."

Lawrence Nyland, Superintendent Emeritus, Seattle Public Schools

Executive leaders of system-wide transformation understand that ambiguity and uncertainty are an integral part of leading improvement efforts. They recognize that, while they may have clarity about the need for their district to become a continuously improving learning organization, the path to achieving that transformation only becomes clearer through engaging in a learning-by-doing journey. Coping productively with not having the answers and embracing the need to collectively learn how to improve enables executive leaders to adjust to changing circumstances to advance improvement.

SCIENTIFIC REASONING

"We had to move from an organization that was compliance driven to a thinking organization. Every decision we made tried to get people to always think of our practices and how we make decisions. What's the statistical data on this? What's the systemic performance?"

David Langford, CEO, Ingenium Schools

Scientific reasoning is characterized by being "empirically minded" and seeking data and evidence to test one's understanding and suppositions. It provides knowledge that can be respected beyond the boundaries of just those who produced it. Such reasoning involves using the scientific method to discipline the process of learning and build shared knowledge, and employing causal reasoning to identify the relationships between causes and their effects. Executive leaders who think scientifically look to research to understand what is currently known in the field and seek evidence grounded in data and practical experience in their own contexts. They habitually and rigorously question their assumptions, asking themselves and others, "How do we know?"

SYSTEMS THINKING

"Systems thinking tells us that when we're making changes to processes, we have to be thinking about the other processes that we're touching and how that impacts our overall system."

Sarah Doerr, District Literacy Coach, School District of Menomonee Falls

Systems thinking is understanding the big picture while also seeing interactions and interdependencies among the structures and processes that make up the

whole. In the context of improvement, it involves the "ability to perceive problems within the systems in which they occur, including seeing the work as a set of interrelated processes that can be broken down, analyzed and improved." Systems thinking further includes recognizing that it is impossible to know with certainty the results of intervening in a complex system and, therefore, requires staying attuned to unintended consequences.

Executive leaders of transformation see and understand their whole district, community, or organization as a system, and they recognize their responsibility to lead change that contributes to improved outcomes for the whole, not just some of its parts. Their appreciation of the interconnections among all organizational levels and departments leads them to resist adopting isolated initiatives. Instead, systems thinking informs their work to bring a coherent design to their district's systems. The result is an organization in which work processes and activities are integrated across departments and levels in service of that organization's vision and improvement efforts.

QUESTIONS FOR REFLECTION:

- What circumstances enable or threaten your adoption of a growth mindset?
- Under what conditions are you motivated by curiosity and the desire to learn as opposed to fear?
- How do you model using scientific reasoning in your daily work? What opportunities do you have to do this more often?
- When you make a decision, how do you understand its potential impact on your system as a whole? On individual children and staff members throughout the system?

CORE PRACTICES

Organizations change when people change their behavior. Executive leaders of transformation model behavior aligned with their organization's vision and with the principles of improvement, demonstrating by their example how to act to advance the collective efforts. The core practices that enable them to do this reliably include:

LIVE THE IMPROVEMENT PRINCIPLES

GET PROXIMATE TO THE WORK

DEMONSTRATE COMPASSION

BE A LEAD LEARNER

LIVE THE IMPROVEMENT PRINCIPLES

"You have to have a focus on improvement ... and then you have to constantly ask yourself and your direct reports, 'Are our processes consistently effective? Are we consistent? Are we reliable? Are we learning? Are we innovating? Are we improving?"

Gregory Gibson, Superintendent of Schools, Schertz-Cibolo-Universal City Independent School District

Improvement science is a methodology and set of tools for engaging in disciplined inquiry to solve problems to improve practice. ¹¹ W. Edwards Deming is widely credited with introducing the quality improvement ideas to industry that spawned approaches such as Lean and Six Sigma. More recently, the Institute for Healthcare Improvement and others have adapted and spread the ideas in healthcare. In 2015, the Carnegie Foundation for the Advancement of Teaching distilled six improvement science principles for use in the

field of education to accelerate problem solving and learning-by-doing in the course of work.¹²

Executive leaders of transforming organizations understand that improvement science is built on the assumption that outcomes are primarily the product of systems, and, therefore, improvement efforts need to target norms, work processes, roles, and relationships to change undesirable outcomes. They draw on their knowledge of improvement science principles, tools, and methods to guide the people in their organizations to achieve desired outcomes in their context. They habitually rely on the six core principles of improvement:

- 1. Seek to understand users and the problems they face. Be empathetic with those on the ground level who are most engaged in the work and learn from them how they experience work and what matters to them. Avoid solutionitis and silver bullets.
- 2. Focus on variation in performance¹⁴ to target improvement efforts. Routinely look at disaggregated data to identify bright spots and problem areas that require further investigation and attention. Use longitudinal data to understand changes in performance over time and to understand how students experience the system as they travel through it.
- 3. See the whole system, resisting adding new initiatives without attending to how all of the parts interconnect as part of a cohesive whole. Encourage staff to consider all of the people and departments who may be affected by a possible change.
- 4. **Embrace measurement** to enable decisions to be grounded in data and evidence. Demand facts rather than assumptions to inform actions. Consider

THE SIX CORE PRINCIPLES OF IMPROVEMENT:

- 1. Make the work problem-specific and user-centered
- 2. Variation in performance is the core problem to address
- 3. See the system that produces the current outcomes
- 4. We cannot improve at scale what we cannot measure
- 5. Anchor practice improvement in disciplined inquiry
- 6. Accelerate improvements through networked communities

Bryk, A.S., Grunow, A., Gomez, L.M., & LeMahieu, P.G. (2015). Learning to Improve: How America's Schools Can Get Better at Getting Better.

Cambridge, MA: Harvard Education Press.

process measures, observation and user perspectives in addition to outcomes data.

- 5. Practice and model disciplined inquiry, and use improvement tools and methods in the course of work. Ask questions that prompt scientific thinking^a as a routine part of conversations and meetings. Ask, "why?" and "what else might be going on here?" to spur others to diagnose problems. Conduct rapid cycles of disciplined inquiry to learn about and solve problems. Model disciplined, scientific thinking in the process of decision-making.
- 6. Foster learning communities. Recognize that learning is a social process, and nurture the structures and interpersonal connections that promote social learning to generate and spread improvement.

a For example, "What specifically is the problem we are trying to solve?", "What change will we make and why?", and "How will we know if the change is an improvement?" (Bryk, A.S., Grunow, A., Gomez, L.M., & LeMahieu, P. (2015). Learning to Improve: How America's Schools Can Get Better at Getting Better. Cambridge, MA: Harvard Education Press.)

GET PROXIMATE TO THE WORK 15

"My role was to encourage and keep up with what they were doing, show up at meetings, provide whatever support was needed. Again, particularly data support. Be the supporter, cheerleader, encourager, whatever you want to call it. People have commented that the currency of leadership is time. Where I spent my time was clearly in support of processes to produce transformational change and better outcomes. Where there was an opportunity to go meet with a group that was getting into it, I would go and, in many cases, just sit and listen but usually have a chance to say a few things which were extravagantly encouraging, and would try to understand where they were confronting barriers and then work to overcome those barriers or remove them."

James Anderson, President and CEO Emeritus, Cincinnati Children's Hospital Medical Center

Leaders of transformation get proximate to the educators, families, and communities they serve, spending their time in support of efforts to improve processes that positively impact outcomes that matter. They are regularly present and visible where work is done, with the goal of learning from and supporting teams in accelerating their progress toward their goals. They also carefully select where and when to engage, using their presence to signal the importance of the work in advancing the organization's vision and "staying in there" alongside their staff and communities during difficult times. Specific practices that support leaders in strategically allocating their time include:

1. "Go and see," is a common practice in industrial improvement efforts that emphasizes observation

- to understand how work is currently done as the foundation for participating in improving that work.
- 2. **Be a reflective partner.** Know the work well enough to ask questions that spur reflection and learning in those you lead.

DEMONSTRATE COMPASSION

"We learned that as long as we were systematically listening and learning from our staff, then we couldn't make unrecoverable mistakes. It was impossible to make them because they were giving us the warning signs ahead of time because we were listening and learning."

Gregory Gibson, Superintendent of Schools, Schertz-Cibolo-Universal City Independent School District

Executive leaders of transformation consistently show compassion¹⁷ toward people because they understand the challenges that are inherent in engaging in transformational change. They acknowledge that improving is difficult work and appreciate and support people's efforts amidst trying circumstances. In doing so, they model for everyone in the community how to treat each other in order to work and learn together effectively. They also contribute to building mutual trust, a foundational building block of a continuous improvement culture. Practices that demonstrate compassion include:

- Listen to learn. Employ active listening. Ask questions and offer support when asked for help. Notice people and learn what matters to them.
- 2. **Leader rounding.**¹⁸ Routinely conduct periodic checkins with direct reports to build personal rapport and identify and remove barriers to improvement.

- 3. Establish routines to celebrate success. Recognize people for their contributions. For example, report staff improvement successes to the board, write personal thank you notes to acknowledge extraordinary efforts, or email "shouts outs" to recognize desired behavior and excellent results.¹⁹
- 4. Model behavior that creates safety for "acceptable failure." ^a Respond to others' failures with compassion and a learning stance that establishes the needed tone and culture for continuous improvement.

BE A LEAD LEARNER

"I ... believe that everyone benefits from coaching, myself included."

David Smith, Superintendent, Evansville Vanderburgh School Corporation

Leading successful transformation depends on continual learning and the development of the dispositions and behaviors that are foundational to creating the conditions for continuous improvement. Engaging routinely in practices that promote growth in these dimensions accelerates executive leader learning, which in turn hones the leader's ability to develop these dispositions and behaviors in others. Such practices include:

- 1. Publicly and transparently share one's own successes and failures, as well as the actions taken based on lessons learned from failure.
- a LeMahieu & Peurach (2017) contend that there are three necessary conditions for failure to enable improvement, which makes failure acceptable: (1) Fail while trying to do things that matter; (2) Manage the cost of failure; and (3) Learn from failures, which depends on the leader modeling the values and establishing a culture of trust, openness and teamwork (LeMahieu, P.G., & Peurach, D.J. (2017, January 5). Acceptable failure [Blog post]. Retrieved from https://www.carnegiefoundation.org/blog/acceptable-failure/).

- 2. **Plan regular times for reflection**²⁰ to examine and learn from the gap between one's predictions and what actually happened.
- 3. **Learn from a personal coach**²¹ who can create a safe space and structure for identifying and acting on high leverage growth opportunities in the course of doing the work of leading transformation.
- 4. **Engage in learning with and from peers**²² who are on similar journeys around core leadership dilemmas.

QUESTIONS FOR REFLECTION:

- What questions do you ask to prompt your leadership team to use improvement science to guide their daily work? What do you want them to do *now* that's different from what was expected before you embarked on your improvement journey?
- Reflect on how you treat others in your organization. In what ways do you model behavior that communicates compassion and reflects the value you place on the experiences of the people you lead?
- How do you respond to your own failures in the context of learning to improve? How do you respond to the failures of others?
- What practices and routines help you stay proximate to the work? How often to you consider recent observation and experience in decision making?
- How do you build learning opportunities into your busy day?
- How do you model transparency? What personal learning or failures have you shared publicly?

LEVERS OF TRANSFORMATION

As those tasked with the responsibility to lead the entire system, executive leaders are well-positioned to influence organizational levers to advance transformation. This section describes actions that executive leaders must take through the use of their authority to establish the organizational conditions to successfully transform the organization. Specifically, executive leaders of system-wide continuous improvement exercise their role authority to:

PROMOTE RADICAL ALIGNMENT

BUILD AN IMPROVEMENT CULTURE

DEVELOP EVERYONE'S IMPROVEMENT CAPABILITIES

INVEST IN IMPROVEMENT INFRASTRUCTURE

PROMOTE RADICAL ALIGNMENT

"Ultimately, (the goal) is to create an aligned, coherent, holistic model rather than implementing single programmatic pieces ... Principal's jobs, teacher's jobs are much harder than any other person working in education, and we expect them to take the research, take these little components, and somehow magically weave them all together, while they're operating a school ... It's an impossible task, and it sets them up for failure."

Diane Tavenner, Founder and CEO, Summit Public Schools

Continuous improvement across an organization depends on aligning everyone's behavior and decision-making to a collectively owned vision and strategy.²³ In a transforming education organization, this vision must include ensuring success for all students. The strategy to achieve that vision is to continually grow the collective capacity to improve.

Alignment ensures coherence across organizational levels and departments, and enables everyone to understand how their work contributes to progress toward the vision.^a It also helps to keep improvement efforts manageable by making clear which work activities and initiatives are essential to realizing shared goals and which are distracting or unnecessary. Executive leaders cultivate such alignment when they:

- 1. Communicate consistently to reinforce the organization's shared vision and strategy. For example, promote a shared improvement narrative and tell compelling improvement stories about pivotal learning moments. Consistently and publicly espouse the key ideas of the organization's vision and the principles of improvement. Intentionally and frequently message expectations for everyone's role in the organization's improvement efforts.
- 2. **Protect the core work** by leveraging organizational strengths and buffering against political, cultural, and other factors that could impact the organization's transformation process. Regularly take the pulse of the organization to understand pain points and external pressures, and act on this knowledge to protect staff from unnecessary distractions. Stop disconnected initiatives.
- 3. **Promote "boundarilessness."**²⁵ Work to break down traditional organizational silos and encourage collaboration across departments, buildings, and levels in service of rapid improvement.

4. Prioritize the allocation of resources to align with organizational vision and strategy. Use scarce time, money, political capital, etc. to invest in high leverage activities and infrastructure to support continuous improvement toward the organization's goals.

"Everybody had a set of goals when I got here, and we have consolidated them into one set of district goals. We had board goals, facility master plan goals, the superintendent's goals. Each campus had goals, the technology had goals. Goals, goals, goals, goals.

"I counted it all up. I think we had 975 goals when I got here that everybody claimed was just as important as the other one. All the leaders, all the direct reports of the superintendent all claimed that each goal was just as important as the next. I can't help but smile now.

"We have four priorities now. Everybody, from the custodian to a board member, can tell you what our four priorities are. Then all of our work, all of our strategic plans, and our scorecards now cascade and line up to those four priorities."

Gregory Gibson, Superintendent of Schools, Schertz-Cibolo-Universal City Independent School District

a In regard to instruction specifically, a coherent instructional system must be aligned to a vision of high-quality instruction at all levels of the system—both district and school—in order to impact classroom teaching and learning.
 (Cobb, P., Jackson, K., Henrick, E., & Smith, T. M. (2020). Systems for instructional improvement: Creating coherence from the classroom to the district office. Cambridge, MA: Harvard Education Press.)

BUILD AN IMPROVEMENT CULTURE

"What we learned over the years was that being transparent about both what you're doing and the results that you're achieving, whether they're good or bad, to a broad audience, is a powerful tool to develop the will to change. The linkage between transparency and trust is great. If you're being transparent and setting the facts out and are conscientious, careful, cautious, and disciplined about what facts you set out and how you set them out, you develop trust from everyone that has a stake in it."

James Anderson, President and CEO Emeritus, Cincinnati Children's Hospital Medical Center

"We learn from our failures. How do we celebrate that and get good at mining failures to make something better out of it?"

Lawrence Nyland, Superintendent Emeritus, Seattle Public Schools

When an improvement culture is in place, the organization is characterized by a safe social learning environment in which members at every level experience psychological safety in tandem with high expectations. ²⁶ People feel valued and empowered to take action to improve, demonstrate humility and openness about their own learning journeys, and ask for help when needed. They are deeply engaged in realizing the organization's vision, and they take collective ownership and pride in the work.

To realize a culture that supports continuous learning and improvement, executive leaders:

 Advance a shared improvement approach and language that gives everyone in the organization a

- common language and way to improve problems affecting their work.²⁷ These common, disciplined, and scientifically-based improvement methods, processes, and protocols enable everyone to produce high-speed learning and rapid problem solving.
- 2. Encourage risk taking in support of learning. Support people to carry out rapid, low-risk tests of change and act on what they learn to advance improvement.
- 3. Unleash the intrinsic motivation²⁸ of staff members, students, community members, and stakeholders, and respect and value the work that they do, regardless of status or position.²⁹ Help make the connection between their improvement efforts and what matters to them.
- 4. **Require transparency.**³⁰ Honestly and transparently communicate current results (whether favorable or not) and ongoing progress and learning, and set clear expectations for others to do the same.
- 5. Compel everyone to quickly identify and remove obstacles to improvement. Do not allow known problems to fester due to inattention or, worse yet, avoidance.
- 6. Establish processes to give people a voice in decisions that affect them and their work.
 Routinely collect and act on input and feedback when considering changes.
- 7. Uphold high expectations for everyone in order to align their behavior with the vision and strategy.³¹
 Reward desired behavior, and swiftly call out and address undesirable behavior. Invite and support people to "get onboard" with improvement efforts, and over time counsel out those who do not want to or cannot change.

DEVELOP EVERYONE'S IMPROVEMENT CAPABILITIES

"... the biggest conversation in our evaluation feedback is, "Okay, you're a great leader. No question about that. You're a star. You're a 10. You do everything we ask you to do. Tell me about your team. What can your team do? When you walk out the door tomorrow, will they replace you? What are you teaching them how to do?"

Lawrence Nyland, Superintendent Emeritus, Seattle Public Schools

Organizational transformation depends on accelerating everyone's learning about how to improve their work to advance their shared vision. After all, the achievement gap that educators seek to close essentially represents a gap between what organizations know how to do and what actually needs to be done to produce the desired result. Building the capability of every individual in the organization is the route to enabling everyone to learn how to "do" improvement and make increasingly valuable contributions through their work. Executive leaders of continuously improving organizations support this needed learning by investing in:

1. A system for individual capability development that enables everyone across all levels of the organization to grow and learn in the areas they most need in order to contribute to achieving the organization's vision. This includes building knowledge related to specific jobs, as well as roleappropriate improvement capabilities. Engage

- external expertise when needed and create opportunities to hone skills through ongoing, coached practice.
- 2. A leadership pipeline to recruit, develop, and build the capabilities of leaders to champion the improvement work and rapidly develop their teams. ³² Create systems to promote and grow leaders from within the organization who demonstrate aptitude and passion for, as well as success in, leading continuous improvement efforts. ³³
- 3. An organization-wide system of accountability that establishes clear, shared expectations for behavior and performance in tandem with a range of support structures to help meet those expectations.³⁴ This system should ensure that everyone knows how they need to behave and what they need to accomplish in order to contribute to the organization's continuous improvement efforts, and that they are provided with the support they need to do so.
- 4. A system to cultivate a wide range of stakeholders as informed champions of the organization's transformation. Systematically grow the commitment and capacity of school board members, union leaders, the media, prominent community members, and parent and student leaders to contribute to advancing improvement efforts within their roles. To do this, leaders ensure that they tell stories to raise the sense of moral urgency around student outcomes, transparently share the progress of improvement efforts, and engage stakeholders in learning-by-doing through personally contributing to ongoing improvement work.

INVEST IN IMPROVEMENT INFRASTRUCTURE

"There's a discipline and a set of structures we put in place to capture data that we can then use to improve. The data we usually have in education provide big, sweeping general assessments on an annual basis, which is not data that you can actually use to improve your practice. We made a real investment in practices and systems to capture data that actually helps with improvement, and then to put that data in the hands of everyone, including our students."

Diane Tavenner, Founder and CEO, Summit Public Schools

Executive leaders are well-positioned to understand how their organization's core structures, systems, and processes currently support continuous improvement efforts, and how they need to be adapted, strengthened, or supplemented to advance transformation.

Ultimately, the organization's capacities and ways of doing work must align with and accelerate the achievement of its vision through continuous improvement. Common high-leverage areas in which systemic investment in an improvement infrastructure can have a significant impact include:

1. Collaborative work structures for collective learning. Continuous improvement requires social learning. Adjust schedules and work structures to secure time for teams to learn and problem-solve together. Craft meeting agendas and shift other uses of time to prioritize learning and continuous improvement.^a

data systems, tools, and processes for collecting, transparently sharing, analyzing, and acting on data related to measures that matter. Ideally, the organization is able to make data broadly accessible in as close to real time as possible to enable everyone to quickly identify and respond to gaps between desired outcomes and current state.

3. A knowledge management system that

2. **Analytic capacity.** This includes expertise and

- 3. A knowledge management system that enables knowledge sharing, collaboration, and communication across the community about what is being learned pertaining to how to get results that make advances toward achieving the vision. This system should include tools, processes, and routines that initiate and support social learning, and should function to rapidly consolidate and spread learning in ways that support others to quickly apply that learning to improve their own work when relevant.³⁶
- 4. **Decision-making processes** that are transparent and enable rapid and effective decision-making and follow-through to remove barriers to improvement. Ensure that the organization specifies how decisions are made and who makes them, as well as expectations for documenting, sharing, and quickly acting on decisions and processes to learn from what happens.
- 5. A system for leaders to evaluate and improve organizational systems and processes. As the organization improves, leaders need reliable ways to systematically assess how well the current infrastructure, systems, and work processes are functioning to support continuous improvement and make adjustments to further advance improvement efforts.

a For example, Professional Learning Communities (PLC's), department and cabinet meetings.

QUESTIONS FOR REFLECTION:

- How many priorities does your district have? Can you and your leadership team name them, and do you know the current status for each? How does each person in the district know what to prioritize in their work today?
- Which of the five high-leverage elements of an improvement infrastructure (see pg. 16) do you have in place? What elements are in development or missing altogether? What do you need to build now to advance your goals?
- What opportunities do you have for better aligning your decisions with your organization's vision and goals?
- In what ways is your organizational culture, including its values and rewards systems, supportive of continuous improvement? What opportunities may exist for strengthening the culture?
- How well are your processes for developing people integrated and aligned with your improvement efforts?
- As the top executive of the organization, what do you need to do to create the conditions for every other person in your organization to successfully learn and improve every day?

APPENDICES

APPENDIX A: REFERENCES AND SOURCES

- Aguilar, J. Personal interview. November 7, 2018.
- Ahlstrom, J. (2014). How to succeed with continuous improvement: A primer for becoming the best in the world. New York, NY: McGraw-Hill Education.
- Anderson, J. (2012). Governance, leadership, management, organizational structure and oversight principles and practices. In P. Batalden and T. Foster (Eds.), Sustainably Improving Health Care: Creatively Linking Care Outcomes, System Performance and Professional Development. London, UK: Radcliffe Publishing.
- Anderson, J. (2018). How we improved care and added millions to the bottom line: an outsider's perspectives. In E. Litvak (Ed.), Optimizing patient flow: advanced strategies for managing variability to enhance access, quality, and safety. Oak Brook, IL: Joint Commission Resources.
- Anderson, J. Personal interview. October 27, 2018.
- Baron, K. (2017). Leading the transformation to a districtwide culture of improvement: A case study of the school districts of Menomonee Falls and Pewaukee, Wisconsin. Unpublished manuscript.
- Biag, M., & Sherer, D. (2019). Getting better at getting better: Improvement dispositions in education. Unpublished manuscript.
- Blenko, M., & Mankins, M. (2010). *Decide and Deliver: Five steps to breakthrough performance in your organization*. Boston, MA: Harvard Business School Publishing.
- Boedker C., Vidgen R., Meagher K., Cogin J., Mouritsen J., & Runnalls J. M (2011). Leadership, culture and management practices of high performing workplaces in Australia: The high performing workplaces index. Sydney, Australia: Society for Knowledge Economics.

- Bremer, M. & McKibbon, B. (2010). Escape the improvement trap: Five ingredients missing in most improvement recipes. Boca Raton, FL: CRC Press.
- Bryk, A.S., Grunow, A., Gomez, L. M., & LeMahieu, P.G. (2015). Learning to improve: How America's schools can get better at getting better. Cambridge, MA: Harvard Education Press.
- Bryk, A. & Schneider, B. (2002). *Trust in schools*. New York, NY: Russell Sage Foundation.
- Childress, S., Elmore, R., & Grossman, A. S. (2006). How to manage urban school districts. Harvard Business Review, 84(11), 55-68. Retrieved from https://hbr.org/2006/11/how-to-manage-urban-school-districts.
- Childress, S., Elmore, R., Grossman, A. S., & King, C. (2011). Note on the PELP Coherence Framework Boston, MA: Public Education Leadership Project at Harvard University.
- Cobb, P., Jackson, K., Henrick, E., & Smith, T. M. (2018). Systems for instructional improvement: Creating coherence from the classroom to the district office. Cambridge, MA: Harvard Education Press.
- David, J., & Talbert, J. (2013). Turning around a high poverty district: Learning from Sanger. San Francisco, CA: SH Cowell Foundation.
- National Education Service. (1992). Shaping America's Future III: Proceedings of the national forum on transforming our system of educating youth with W. Edwards Deming. Bloomington, IN: Author.
- DeSmet, A., Lurie, M., & St. George, A. (2018). Leading agile transformation: The new capabilities leaders need to build 21st-century organizations. Retrieved from mckinsey.com
- Detert, J. R., Schroeder, R. G., & Mauriel, J. J. (2000) A framework for linking culture and improvement initiatives in organizations. *Academy of Management Review 25*(4), 850-863.

- Carol Dweck revisits the 'growth mindset'. Education Week. o9/22/15. Retrieved from: https://www.edweek.org/ew/articles/2015/09/23/carol-dweck-revisits-the-growth-mindset.html?cmp=cpc-goog-ew-growth+mindset&c-cid=growth+mindset&%2occag=growth+mindset&cck-w=%2Bgrowth%20%2Bmindset&cccv=content+ad&g-clid=CjoKEQiAnvfDBRCXrabLl6-6t-oBEiQAW4SRUM7nek-FnoTxc675qBMSJycFgwERohguZWVmNDcS%2oUg-5gaAk3l8P8HAQ.
- Edmondson, A., & Tucker, A. (2011). Cincinnati children's hospital medical center (Rep. No. 9-609-109). Cambridge, MA: Harvard Business School.
- Edmondson, A. (2012). Teaming: How organizations learn, innovate and compete in the knowledge economy. San Francisco, CA: Jossey-Bass.
- Edmondson, A.E., & Lei, Z. (2014). Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 23-43.
- Four Ways to Help Bend the Moral Arc of the Universe toward Justice. (2018). Retrieved December 7, 2019, from https://www.educationpioneers.org/blog/four-ways-help-bend-moral-arc-universe-toward-justice.
- Fullan, M. & Quinn, J. (2015). *Coherence: The right drivers in action for schools, districts, and systems.* Thousand Oaks, CA: Corwin Press and the Ontario Principal's Council.
- Garvin, D. (1993). Building a learning organization; *Harvard Business Review*, Jul-Aug. Retrieved from https://hbr.org/1993/07/building-a-learning-organization.
- Gawande, A. (2004). The bell curve: What happens when patients find out how good their doctors really are? *The New Yorker*, 80(38), 82-91.
- Gibson, G. Personal interview. November 7, 2018.
- Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence.*Boston, MA: Harvard Business School Publishing.
- Grunow, A., Hough, H., Park, S., Willis, J, Krausen, K. (2018). Getting down to facts II: Towards a common vision of continuous improvement for California. Stanford, CA: Stanford University & Policy Analysis for California Education.
- Hanson, M. Personal interview. November 19, 2018.

- Heifetz, R., Grashow, A., & Linsky, M. (2009). The practice of adaptive leadership: Tools and tactics for changing your organization and the world. Boston, MA: Harvard Business Press.
- Hilton, K., & Anderson, A. (2018). *IHI psychology of change framework to advance and sustain improvement.* Boston, MA: Institute for Healthcare Improvement.
- Honig, M. I. (2013). From tinkering to transformation: Strengthening school district central office performance. *Education Outlook* (4), 1-10. Washington DC: American Enterprise Institute for Public Policy Research.
- Honig, M. I. (2010). Central office transformation for district-wide teaching and learning improvement. Seattle, WA: Center for the Study of Teaching and Policy, University of Washington.
- Honig, M. I. (2008). District central offices as learning organizations: How sociocultural and organizational learning theories elaborate district central office administrators' participation in teaching and learning improvement efforts. *American Journal of Education* (114), 627-664.
- Keller, S., & Meaney, M. (2017). Leading organizations: Ten timeless truths. New York, NY: Bloomsbury Publishing Pic.
- Keltner, A. Personal interview. December 4, 2018.
- Kotter, J. P., (2008). *A sense of urgency*. Boston, MA: Harvard Business School Publishing.
- Kotter, J.P. & Cohen, D. (2012). *The heart of change*. Boston, MA: Harvard Business Review Press.
- Langford, D. Personal interview. November 5, 2018.
- Langley, G.J., Moen, R.D., Nolan, K.M., Nolan, T.W., Norma,C.L., & Provost, L.P. (2009). The improvement guide:A practical approach to enhancing organizational performance (2nd ed.). San Francisco, CA: Jossey-Bass.
- Leithwood, K. (2010). Characteristics of school districts that are exceptionally effective at closing the achievement gap. *Leadership and Policy in Schools*, 9 (3), 245-291.
- LeMahieu, P.G., Grunow, A., Baker, L., Nordstrum, L. E., & Gomez, L. M. (2017). Working to improve: Seven approaches to quality improvement in education. *Quality Assurance in Education*, *25*(1), 2-4. Doi:10.1108/QAE-12-2016-0086.
- LeMahieu, P.G., & Peurach, D. J. (2017). Acceptable failure. [Blog post] Retrieved from https://www.carnegiefoundation.org/blog/acceptable-failure/.

- Lenk, MaryAnne. Personal interview. November 28, 2018.
- Leopold, K., & Kaltenecker, S. (2015). *Kanban Change Leadership*. Hobken, NJ: John Wiley & Sons. Lucas, B., & Nacer, H. (2015). *The habits of an improver*. London, UK: The Health Foundation.
- Lukas, C. V., Holmes, S. K., Cohen, S. K., Restuccia, J., Cramer, I. E., Shwartz, M., & Charnes, M. P. (2007). Transformational change in health care systems: An organizational model. *Health Care Management Review*, 32(4), 309-320.doi: 10.1097/01.HMR.0000296785.29718.5d.
- Marzano, R. J., Warrick, P. B., & Simms, J. A. (2014). *A handbook for high reliability schools: the next step in school reform.* Bloomington, IN: Marzano Research.
- National Institute of Standards and Technology. (2017-2018). *Baldridge excellence builder*. Washington D.C.: U.S. Department of Commerce.
- Nelly, P. Personal interview. November 28, 2018.
- Nyland, L. Personal interview. October 5, 2018.
- O'Day, J.A., & Smith, M.S. (2019). Opportunity for all: A framework for quality and equity in education. Cambridge, MA: Harvard Education Press.
- Park, S., Hironaka, S., Carver, P., & Nordstrum, L. (2013). Continuous improvement in education. Stanford, CA: The Carnegie Foundation for the Advancement of Teaching.
- Prast, H. Personal interview. December 11, 2018.
- Presidio, S. Personal interview. November 28, 2018.
- Radtke, M. Personal interview. October 24, 2018.
- Peurach, D. J., & Gumus, E. (2011). Executive leadership in school improvement networks: A conceptual framework and agenda for research. *Current Issues in Education* 14(3).
- Pilcher, J., & Studer, Q. (2014). *Maximize performance:*Creating a culture for educational excellence. Dover, AR:
 Firestarter Publications.
- Reinertsen, J.L., Bisognano, M., & Pugh, M.D. (2008). Seven leadership leverage points for organization- level improvement in health care (2nd ed.). Cambridge, MA: Institute for Healthcare Improvement.
- Santelises, S. Personal interview. February 2, 2020.
- Saphier, J. Personal interview. October 24, 2018.
- Saphier, J. (n.d.) The black box of collective efficacy. Acton, MA: Research for Better Teaching, Inc. Saphier, J. (2012). The high-expertise teaching project. Unpublished paper.

- Acton, MA: Research for Better Teaching, Inc.
- Scholtes, P. R., Joiner, B. L., & Streibel, B. J. (2003). *The team handbook* (3rd ed.) Winaukee, WI: Suttle- Straus, Inc.
- Schultz, J. Personal interview. December 11, 2018.
- Schwahn, C. J., & Spady, W. (2001). *Total leaders: Applying the best future-focused change strategies to education.*Lanham, MD: The Scarecrow Press, Inc.
- Shingo Institute. (2018). Shingo Model. Logan UT: Shingo Institute, Utah State University.
- Silva, C. Personal interview. January 3, 2019.
- Smith, D. Personal interview. October 10, 2018.
- Spear, S. J. (2009). Chasing the rabbit: How market leaders outdistance the competition and how great companies can catch up and win. New York, NY: McGraw-Hill.
- Studer Education. (2019). Nine principles of organizational excellence. Retrieved from: https://www.studereducation.com/nine-principles-of-organizational-excellence.
- Swenson, S., Pugh, M., McMullan, C., & Kabcenell, A. (2013). High impact leadership: improve care, improve the health of populations, and reduce costs. Cambridge, MA: Institute for Healthcare Improvement.
- Talbert, J. Personal interview. October 29, 2018.
- Tavenner, D. Personal interview. December 13, 2018.
- Taylor, I. Personal interview. December 10, 2018.
- Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. *NEMJ Catalyst*. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.
- Value Capture (n.d.) *Leadership model*. Unpublished manuscript.
- Wheatley, M. J. (2005). Finding our way: Leadership for an uncertain time. Oakland, CA:Berrett- Koehler Publishers, Inc.
- Wheatley, M. J. (2006). Leadership and the new science: Discovering order in a chaotic world (3rd ed.). Oakland, CA: Berrett-Koehler Publishers, Inc.
- Zarbo, R. J. (2012). Creating and sustaining a lean culture of continuous process improvement. *American Journal of Clinical Psychology* 138(3), 321-326. Pensacola, FL: Studer Group Publishing.

APPENDIX B: INTERVIEWS

- Jorge Aguilar, Superintendent, Sacramento Unified School District
- James Anderson, President and CEO Emeritus, Cincinnati Children's Hospital Medical Center
- Gregory Gibson, Superintendent of Schools, Schertz-Cibolo-Universal City Independent School District
- Michael Hanson, Superintendent Emeritus, Fresno Unified School District
- Amy Keltner, Deputy Chief of Schools, Denver Public Schools
- David Langford, Superintendent, Ingenium Schools and CEO of Langford International
- MaryAnne Lenk, Director, QI Education and Training, James M. Anderson Center for Health Systems Excellence, Cincinnati Children's Hospital Medical Center
- Pamela Nelly, Sr. Specialist Project Management, Director, QI Education and Training James M. Anderson Center for Health Systems Excellence, Cincinnati Children's Hospital Medical Center
- Lawrence Nyland, Superintendent Emeritus, Seattle Public Schools

- Holly Prast, Assistant Superintendent, Kimberly Area School District
- Sloan Presidio, Assistant Superintendent of the Instructional Services Department, Fairfax County Public Schools
- Michael Radtke, Cofounder and Lead Consultant, New Roots Consulting LLC
- Sonja Santelises, CEO, Baltimore City Public Schools and Board Member, Carnegie Foundation for the Advancement of Teaching
- John Saphier, Founder and President, Research for Better Teaching, Inc. (RBT)
- John Schultz, Director of Student Improvement, Kimberly Area School District
- Claire Silva, Data Specialist, Instructional Support, Fairfax County Public Schools
- David Smith, Superintendent, Evansville Vanderburgh School Corporation
- Joan Talbert, Senior Research Scholar, Stanford School of Education
- Diane Tavenner, Founder and CEO, Summit Public Schools
- Iris Taylor, Chief Academic Officer, Sacramento Unified School District

ENDNOTES

- O'Day, J.A., & Smith, M.S. (2019). Opportunity for all: A framework for quality and equity in education. Cambridge, MA: Harvard Education Press.
- 2 For a deeper discussion of this topic, see O'Day, J.A., & Smith, M.S. (2019). Opportunity for all: A framework for quality and equity in education. Cambridge, MA: Harvard Education Press.
- 3 Park, S., Hironaka, S., Carver, P., & Nordstrum, L. (2013). Continuous improvement in education. Stanford, CA: The Carnegie Foundation for the Advancement of Teaching; Grunow, A., Hough, H., Park, S., Willis, J., & Krausen, K. (2018). Getting Down to Facts II: Towards a common vision of Continuous Improvement for California. Stanford, CA: Stanford University & Policy Analysis for California Education; O'Day, J.A., & Smith, M.S. (2019). Opportunity for all: A framework for quality and equity in education. Cambridge, MA: Harvard Education Press.
- 4 National Education Service. (1992). Shaping America's Future III: Proceedings of the national forum on transforming our system of educating youth with W. Edwards Deming. Bloomington, IN: Author.
- National Education Service. (1992). Shaping America's Future III: Proceedings of the national forum on transforming our system of educating youth with W. Edwards Deming. Bloomington, IN: Author.
- 6 For more information about the dispositions of improvers, see Biag, M., & Sherer, D. (2019). Getting better at getting better: Improvement dispositions in education. Unpublished manuscript.
- 7 Carol Dweck revisits the 'growth mindset'. Education Week. 09/22/15.
- 8 Shingo Institute. (2018). Shingo Model. Logan UT: Shingo Institute, Utah State University. Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. NEMJ Catalyst. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.
- 9 Biag, M., & Sherer, D. (2019). Getting better at getting better: Improvement dispositions in education. Unpublished manuscript.
- 10 Biag, M., & Sherer, D. (2019). Getting better at getting better: Improvement dispositions in education. Unpublished manuscript.

- 11 Langley, G.J., Moen, R.D., Nolan, K.M., Nolan, T.W., Norma, C.L., & Provost, L.P. (2009). The improvement guide: A practical approach to enhancing organizational performance (2nd ed.). San Francisco, CA: Jossey-Bass.
- 12 Bryk, A.S., Grunow, A., Gomez, L.M., & LeMahieu, P.G. (2015). Learning to improve: How America's schools can get better at getting better. Cambridge, MA: Harvard Education Press.
- 13 Grunow, A., Hough, H., Park, S., Willis, J., & Krausen, K. (2018). Getting Down to Facts II: Towards a Common Vision of Continuous Improvement for California. Stanford, CA: Stanford University & Policy Analysis for California Education.
- 14 Bryk, A.S., Grunow, A., Gomez, L.M., & LeMahieu, P.G. (2015). Learning to Improve: How America's Schools Can Get Better at Getting Better. Cambridge, MA: Harvard Education Press.
- 15 The phrase "get proximate" is attributed to Bryan Stevenson. https://www.educationpioneers.org/ blog/four-ways-help-bend-moral-arc-universetoward-justice.
- 16 Also known as "going to gemba," the place where work is done. See Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. NEMJ Catalyst. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.
- 17 Boedker C., Vidgen R., Meagher K., Cogin J., Mouritsen J., & Runnalls J. M (2011). Leadership, Culture and Management Practices of High-Performing Workplaces in Australia: The High-Performing Workplaces Index. Sydney, Australia: Society for Knowledge Economics.
- 18 Pilcher, J., & Studer, Q. (2014). Maximize performance: Creating a culture for educational excellence. Dover, AR: Firestarter Publications.
- 19 Pilcher, J., & Studer, Q. (2014). Maximize performance: Creating a culture for educational excellence. Dover, AR: Firestarter Publications.
- 20 Lukas, C.V., Holmes, S.K., Cohen, S.K., Restuccia, J., Cramer, I.E., Shwartz, M., & Charnes, M.P. (2007). Transformational change in health care systems: An organizational model. Health Care Management Review, 32(4), 309-320.doi: 10.1097/01.HMR.0000296785.29718.5d.; Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. NEMJ Catalyst. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.

- 21 Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. NEMJ Catalyst. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.
- 22 Toussaint, J.S., & Ehrlich, S.P. (2017). Five changes great leaders make to develop an improvement culture. NEMJ Catalyst. Retrieved from http://catalyst.nemj.org/five-changes-great-leaders-improvement-culture/.
- 23 Childress, S., Elmore, R., & Grossman, A.S. (2006). How to manage urban school districts. *Harvard Business Review, 84*(11), 55-68; Shingo Institute. (2018). Shingo Model. Logan, UT: Shingo Institute, Utah State University; Swenson, S., Pugh, M., McMullan, C., & Kabcenell, A. (2013). *High-impact leadership: Improve Care, Improve the Health of Populations, and Reduce Costs.* Cambridge, MA: Institute for Healthcare Improvement; Studer Education. (2019). Nine principles of organizational excellence. Retrieved from: https://www.studereducation.com/nine-principles-of-organizational-excellence.
- 24 Studer Education. (2019). Nine principles of organizational excellence. Retrieved from: https://www.studereducation.com/nine-principles-of-organizational-excellence.
- 25 Swenson, S., Pugh, M., McMullan, C., & Kabcenell, A. (2013). High impact leadership: improve care, improve the health of populations, and reduce costs. Cambridge, MA: Institute for Healthcare Improvement.
- 26 Frankel A., Haraden, C., Federico, F., & Lenoci-Edwards, J. (2017). A Framework for Safe, Reliable, and Effective Care. White Paper. Cambridge, MA: Institute for Healthcare Improvement.
- 27 For a description of a range of quality improvement approaches that have been employed in education, see LeMahieu, P.G., Grunow, A., Baker, L., Nordstrum, L. E., & Gomez, L. M. (2017). Working to improve: Seven approaches to quality improvement in education. Quality Assurance in Education, 25(1), 2-4. Doi:10.1108/OAE-12-2016-0086.
- 28 Hilton, K., & Anderson, A. (2018). IHI psychology of change framework to advance and sustain improvement. Boston, MA: Institute for Healthcare Improvement.
- 29 Shingo Institute. (2018). Shingo Model. Logan, UT: Shingo Institute, Utah State University.

- 30 Value Capture (n.d.) Leadership model.
 Unpublished manuscript; Frankel A., Haraden,
 C., Federico, F., & Lenoci-Edwards, J. (2017).
 A Framework for Safe, Reliable, and Effective
 Care. White Paper. Cambridge, MA: Institute for
 Healthcare Improvement.
- 31 Frankel A., Haraden, C., Federico, F., & Lenoci-Edwards, J. (2017). A Framework for Safe, Reliable, and Effective Care. White Paper. Cambridge, MA: Institute for Healthcare Improvement.
- 32 Studer Education. (2019). Nine principles of organizational excellence. Retrieved from: https://www.studereducation.com/nine-principles-of-organizational-excellence; Spear, S.J. (2009). Chasing the rabbit: How market leaders outdistance the competition and how great companies can catch up and win. New York, NY: McGraw-Hill.
- 33 David, J., & Talbert, J. (2013). Turning around a high poverty district: Learning from Sanger. San Francisco, CA: SH Cowell Foundation.
- 34 Pilcher, J., & Studer, Q. (2014). Maximize performance: Creating a culture for educational excellence. Dover, AR: Firestarter Publications.
- 35 Leithwood, K. (2010). Characteristics of school districts that are exceptionally effective at closing the achievement gap. Leadership and Policy in Schools, 9 (3), 245-291.
- 36 Spear, S.J. (2009). Chasing the rabbit: How market leaders outdistance the competition and how great companies can catch up and win. New York, NY: McGraw-Hill.

ABOUT THE AUTHORS

Christina Dixon is an advisor, consultant, and coach who partners with education leaders to transform their organizations through continuous improvement. She currently collaborates with the Improvement Collective, WestEd, the University of Pittsburgh, Studer Education, A+ Schools, and the Carnegie Foundation for the Advancement of Teaching, the latter of which she recently served as an Associate for networked improvement science. Prior to joining the Foundation, Dixon provided coaching, on-site support, and professional development to leaders of education, healthcare, and nonprofit organizations seeking to use systems principles to better meet the needs of the people they serve. She co-founded True North Institute, in which she supported Bedford Area School District in creating a model for using Toyota Production System principles to improve student achievement. Dixon was also a principal of Value Capture, LLC, in which she consulted with healthcare systems to accelerate their transformation to achieve safety, quality, and financial goals. She also served as Executive Director of Summerbridge Pittsburgh and as National Service Director for Summerbridge National (now Breakthrough Collaborative).

Dixon holds a B.A. from Stanford University in human biology, an M.Ed. from Bank Street College of Education, and an Ed.D. in Education Leadership from the University of Virginia. Dr. Simone Palmer originally joined the Carnegie Foundation for the Advancement of Teaching as a networked improvement science fellow in 2018; she now serves as an Associate in the same area. Previously, she served as the Science and Technology Specialist for the Rhode Island Department of Education. She taught secondary science for eight years before completing a principal training program through the University of Denver. Dr. Palmer returned to her native Rhode Island to complete an urban turnaround leader program through the New York City Leadership Academy. She then served as STEM director for South Kingstown School District before working at the state level.

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