

Executive Summary

Transforming the Education Sector into a Learning System

Perspectives from the Field and Recommendations for Action



Every day, educators, advocates, and families strive to ensure that our schools prepare all students to excel academically and thrive in life. To realize that ambitious goal, we must ensure that our education sector functions at all levels as a learning system. Too often, though, a culture of compliance and a desire to preserve the status quo take precedence over innovation and improvement, slowing the pace of progress.

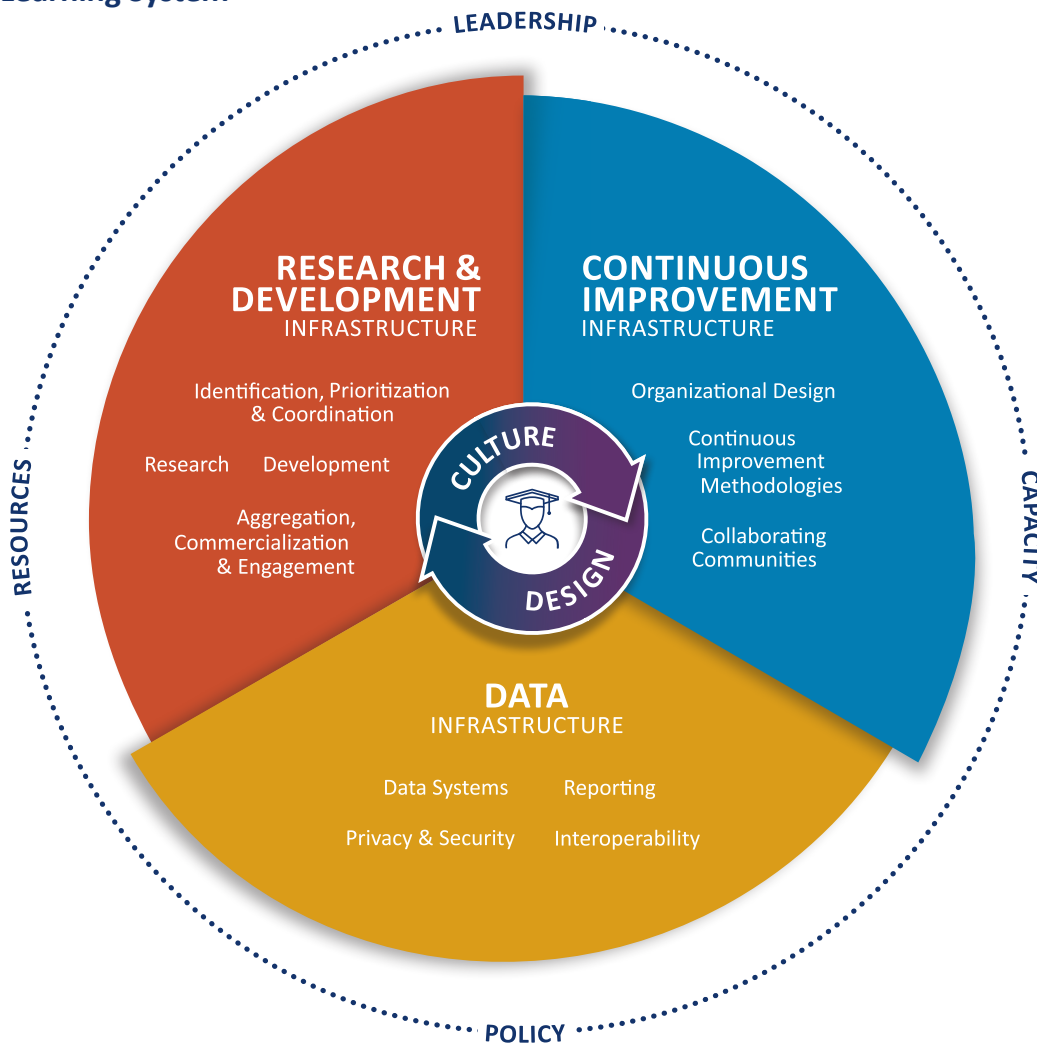
In a February 2019 paper, *Transforming the Education Sector into a Learning System: Harnessing the Power of Continuous Improvement, Research & Development, and Data to Improve Outcomes for Each and Every Child*, EducationCounsel presented a vision and framework for a robust learning system in education. Achieving this vision requires both a culture of continuous learning and several key system components, including research and development (R&D), continuous improvement, and data infrastructures.

1. **An R&D infrastructure** enables the generation and evaluation of insights, evidence, tools, programs, policies, and practices to inform and support teaching and learning. A strong R&D infrastructure allows all stakeholders to surface issues and anomalies in the field; prioritize and coordinate research efforts; generate various forms of research evidence; develop innovative, research-based tools and strategies; support the ongoing translation and dissemination of research to the field; and engage with and empower professionals across the system.

2. **A continuous improvement infrastructure** supports ongoing, collaborative efforts in policy and practice to implement, refine, and provide feedback on solutions generated by R&D and practitioner-led innovation. This component of the learning system includes, at all levels, built-in mechanisms that advance research-based, data-informed actions; guide reasoned adaptations of those actions to suit particular contexts; and feed further research, development, and scaling of promising approaches.
3. **A data infrastructure** makes it possible for every person with a stake in education to have the timely and tailored information needed to make the best decisions possible in their role and circumstance. An effective data infrastructure enables the collection, linkage, and protection of the data required to answer end users' questions while safeguarding individuals' privacy. In addition, it promotes transparency as to how the system is serving students.

Working across all these components are four key drivers of a learning system — human capacity, resources, leadership, and policy and incentives — that must be aligned to the learning system vision. The relationships between these parts of a learning system are shown in the figure below.

Education Learning System



Ultimately, we need the kind of culture in education where continuous improvement is simply part of the way business is done. Structures and processes can be designed to promote a learning-oriented culture that in turn reinforces and sustains those structures and processes in a virtuous cycle. But a learning-oriented culture cannot be created without direct and early efforts to build understanding and trust among people in the system. Without shifting mindsets and behavior, improvement efforts will fail to take hold.

EducationCounsel and Carnegie Corporation of New York are now picking up where that earlier paper left off by grappling with the critical question of how to accelerate the shift from our current system to the learning system we need.

Challenges with the Current System

Any consideration of how we advance toward a learning system must begin with an attempt to better understand the existing system and how it operates. To gain insights into the structures and processes that characterize our current system, we interviewed 60 leaders in the field across all levels of the education sector. Below, we highlight seven challenges or gaps in the current system that emerged as prominent themes from our past research and interviews. We organize this discussion across the three components of the learning system mentioned above (and described in greater detail in *Transforming the Education Sector into a Learning System*).

While some of the challenges we identified are structural, others are cultural. Overcoming the latter will require sustained leadership and vision to change existing norms and values. Interviewees frequently remarked on the need to shift from a compliance mentality toward an inquiry stance and to build the trust required for innovation, improvement, and learning.

Another theme cutting across the challenges described here (and our recommendations for early action) relates to the inequitable structures and processes built into the current system. The status quo often perpetuates rather than challenges — much less dismantles — inequities through policies, practices, and mindsets that privilege some and oppress others. Any effort to develop a learning system must advance equity by identifying problematic disparities and addressing them head-on.

CONTINUOUS IMPROVEMENT INFRASTRUCTURE

Challenge 1: Organizational culture and incentives do not support continuous learning and improvement.

For the education sector to become a learning system, we must cultivate trust and a learning mindset among all stakeholders. The process starts with leaders and governing bodies, which set the vision, incentives, and priorities for a system. Currently, though, many argue that a culture of compliance — along with the sometimes punitive role accountability measures can play — has reduced levels of trust, created short timelines for showing improvement, incentivized a focus on test scores to the exclusion of other measures of learning, and promoted a tendency among practitioners to play it safe rather than working to learn and innovate. For a learning system to take hold, the emphasis needs to be less on control and regulation and more on the creation of structures that enable frontline practitioners to learn from one another and from data and evidence, to develop new ideas, and to spread those ideas across institutions. Such a system needs an assessment and accountability structure with more balanced emphases on improving ongoing processes and improving student outcomes. This shift should begin in pre-service

preparation programs, which must also better prepare educators and leaders to use research evidence and engage in continuous improvement as part of a baseline standard of care for teaching.

Challenge 2: The structures and conditions needed to support continuous learning are not adequately developed.

Cultivating a learning system requires organizations to create and support collaborative professional learning structures, both formal and informal, that can advance and accelerate learning beyond what is possible on an individual basis. Such mechanisms for capacity-building must exist at all levels of the education sector, not just for classroom teachers, so that improvement activities can take place throughout the system. Yet current allocations of time, resources, and capacity within education do not support the prioritization of continuous learning.

R&D INFRASTRUCTURE

Challenge 3: Funding for R&D in education is low, especially on the development side.

Compared with other sectors, such as the transportation, energy, health, and defense industries, the education sector underinvests in R&D — particularly in directed development at the intersection of basic and applied research to address urgent problems in the field. Because major structural changes to the supply side of the R&D infrastructure require big shifts in financial and political capital, the best bet for significant change may be on the demand side. Motivated leaders at the state, local, and professional levels can reconsider how their institutions use evidence and lead the call for actionable, contextualized research, along with products, tools, and strategies to connect that research to practice.

Challenge 4: Approaches to knowledge creation are not tailored to policy and practice needs.

The dominant approach to knowledge creation, in which researchers identify what works and push knowledge into the field, often fails to address the problems of most importance to policymakers and practitioners. This approach results in fragmented and uncoordinated guidance focused on individual programs and practices, and it often relies on timelines and research methods that are too slow and costly to meet policy and practice needs. The field would benefit from greater attention to issues of implementation, including variations across local contexts, along with collaborative problem-solving approaches that connect researchers with the problems and insights of frontline practitioners.

Challenge 5: The field lacks commonly agreed-upon evidence standards and a common vocabulary.

What counts as evidence remains a highly contested topic. The key is to help practitioners and policymakers determine the types of evidence and the level of rigor needed to make specific decisions. The field also needs more common taxonomies and definitions to facilitate better collaboration and help practitioners and policymakers navigate the evidence base. Research also needs to broaden the definition of student success beyond test scores alone, both to reflect the full range of student outcomes and to identify interim measures that are correlated with longer-term goals, particularly for early-stage innovations.

Challenge 6: Approaches to diffusing knowledge do not reflect how stakeholders acquire and use information.

Researchers continue to disseminate information primarily through research reports, journal articles, case studies, and websites. Yet extensive evidence shows that stakeholders at all levels of the education system — teachers, principals, district leaders, policymakers — primarily rely upon their peers, personal networks, and professional associations to access knowledge. Moreover, the most useful information is timely,

actionable (embedded in tools, protocols, rubrics, and guidelines), and context-specific. Research has found that personal ties and social influence matter when it comes to changing behaviors and beliefs, but the field too infrequently uses the power of networks to enhance knowledge dissemination and use. It also underuses feedback loops and user testing to ensure that knowledge products fit the needs of end users.

DATA INFRASTRUCTURE

Challenge 7: *The culture of data use needs to be strengthened, and concerns about data privacy and security need to be addressed.*

Both the data infrastructure and the culture of data use in education have made significant gains in recent years, but a learning system requires still better data systems, tools, and policies to facilitate regular and productive data use. Practitioners often have access to more data than they know what to do with, but even then, it is not always the right data, provided in the right way, at the right time, to the right people, with the right supports to understand and use it effectively.

Recommendations

Moving toward a learning system is a long-term endeavor requiring multiple actions by various actors at different levels of the system over many years. Given the complexity of this process, it can be difficult to determine where to start. But several actions can be taken now, and many efforts already underway can be sustained or expanded.

The following six recommendations are ripe for action and would meaningfully advance our vision. We organize these recommendations according to the four key drivers of a learning system: human capacity, resources, leadership, and policy and incentives.

It is critical to keep in mind that every effort to shift toward a learning system must attend to the intertwined concepts of culture, design, and equity. Otherwise, attempts to advance toward a learning system in education could serve the few rather than the many and unintentionally uphold or exacerbate systemic inequities.

HUMAN CAPACITY

The education sector can only develop the culture and structures of a healthy learning system if its professionals and stakeholders have the knowledge, skills, and mindsets needed to drive shifts in roles and structures. Because human capacity is the lifeblood of any social sector organization or system, all efforts to shift toward a learning system must include a strategic focus on this driver. Examples include taking better advantage of existing capacity; helping staff develop new knowledge, skills, and mindsets; and, where necessary, investing in new roles and teams.

Recommendation 1: *Define the capacities we need.*

Agree on and describe the knowledge, skills, and mindsets required for individuals at every level — federal, state, district, school, and classroom — to support a learning system.

The importance of investing in people at all levels to build their capacities and alter their responsibilities was one of the most consistent themes that emerged from our research and discussions. We can start by

working with leaders and practitioners throughout the system to make all roles more explicit and concrete.

This work might proceed in several phases:

- First, identify existing roles and stakeholders, gather and crosswalk existing frameworks that outline the capacities they need, develop a common vocabulary around these capacities, and identify any previously unarticulated but critical roles and capacities.
- Second, define the knowledge, skills, and mindsets needed in existing and new roles throughout the system.
- Third, disseminate these definitions in accessible formats customized for the audiences most likely to help develop human capacity.

RESOURCES

Establishing, strengthening, and sustaining a learning system in education requires reallocating existing resources and investing additional resources at each level of the system — and not just in terms of funding, although funding is critical. Necessary resources also include, for example, new organizational designs, more and different uses of time, human capacity, data systems, and feedback loops.

Recommendation 2: Invest more in the education R&D infrastructure.

Use existing R&D funding and seek additional investments to improve the current infrastructure and create new capacity.

The R&D infrastructure in education needs more resources. With additional federal funding — potentially augmented by state, local, and philanthropic funding — we could improve the relatively small existing infrastructure and create new capacity, particularly to expand the development side.

Specific approaches to expanding R&D capacity include:

- making better use of existing resources that are often overlooked in education R&D;
- seeking additional funding from Congress, such as through the reauthorization of the Education Sciences Research Act; and
- creating new models of R&D investments in education, such as entities analogous to the Defense Advanced Research Projects Agency.

Recommendation 3: Invest more in RPPs.

Expand the role high-quality RPPs play across the education system by creating new RPPs, strengthening existing ones, and connecting them through networks to drive continuous improvement.

RPPs embody the aspiration of greater connectivity, relating directly to some of the main challenges with our existing system — especially the need for R&D to produce more relevant and actionable research. RPPs can explicitly model the ways in which the three learning system components or infrastructures must maintain two-way, dynamic relationships. Two main strategies are necessary for maximizing the potential of RPPs to create closer connections between research and practice:

- First, we must create new RPPs and strengthen existing ones to facilitate sustained joint problem-solving by researchers, policymakers, and practitioners to improve student outcomes. State education agencies should all have robust, sustainable RPPs. Where practicable, districts should also form their own RPPs or join together to form a research alliance.
- Second, education RPPs should be networked for improvement, with the support of a well-resourced hub or similar centralized structure that enables and accelerates shared learning across individual, place-based RPPs.

LEADERSHIP

The shift toward a learning system in education will require clear, committed, ongoing leadership at all levels of the system — leadership that attends to the human side of change early and often. Strong leadership is essential to elevating the need for a learning system and shifting mindsets; dedicating sufficient resources to build and sustain critical systems; defining shared goals to guide those systems; establishing supportive policies; energizing and engaging stakeholders; and empowering educators and others to take risks, make mistakes, and learn and improve from them.

Recommendation 4: Identify, connect, and develop the field of learning system leaders.

Create structures that support current leaders in working together to develop and enlist new leaders at all levels of the system.

We are not starting from scratch in our efforts to transform the education sector into a learning system. There are pockets of excellence (or at least promise) that should be identified, supported, studied, and, where appropriate, replicated with reasoned adaptation. But to enable learning across the system at scale, we must more systematically identify, connect, and develop learning system leaders. Early, high-impact actions that support this aim include the following:

- First, fully map current efforts to transform the education sector into a learning system. Who is doing what, and where are they doing it?
- Second, regularly convene leaders who are building the learning system. Their meetings can produce insights, begin to break down silos, increase understanding of the wide range of roles and work involved in a learning system, strengthen relationships, and surface opportunities and risks.
- Third, develop a coordinated field-building strategy to enlist new leaders. Given the ambition and scale of the overall goal, we need a comprehensive and cohesive field-building and support strategy to transform the system.

POLICY AND INCENTIVES

A core principle of systems change is that leverage matters. As we work toward a well-aligned legislative, regulatory, and administrative landscape to support a learning system approach in education, we should take advantage of current policies where appropriate to support and maximize the effectiveness of our efforts. We should also develop a more comprehensive policy framework for learning systems to help sustain them over the long term.

Recommendation 5: Capitalize on ongoing efforts to implement the Every Student Succeeds Act (ESSA). *Harness the resources and energy being applied to the implementation of ESSA to begin or advance the shift toward a learning system approach.*

From instituting school accountability systems to increasing the effectiveness of teachers and leaders to designing supports for low-performing schools, states and districts implementing ESSA are undertaking multiple changes that could be coupled with efforts to manifest the learning system vision. Further, many key functions of a learning system — continuous improvement, data collection and reporting, use of evidence-based approaches, progress monitoring, and evaluation — are newly baked into the law via ESSA.

ESSA implementation thus provides an array of opportunities to embrace a learning system approach. The United States Department of Education, state and local educational agencies, schools, and organizations supporting ESSA implementation should review their plans and systems to take advantage of these opportunities.

Recommendation 6: Develop a learning systems policy framework. *Articulate a set of model policies to help align policies and incentives to an overall vision of a learning system so that policymakers can audit their current policies and revise them where necessary.*

Ultimately, we need policymakers to audit their systems' policies beyond ESSA and, where necessary, redesign them to support a learning system approach. However, there is not yet a comprehensive framework that can be adapted and adopted in local contexts.

Developing such a framework will require collaboration among a cross-section of policy leaders and practitioners. These leaders should review the legal and regulatory context and crosswalk existing policy recommendations that are aligned with a learning system vision. After identifying what may be missing, the group should draft new proposals to complete the policy framework.

The change we seek is significant. The learning system we need will look quite different from the system we currently have. Given our ambitious vision for what's possible, the seven challenges and six recommended actions presented here are just starting points for making this shift. Executing on any of these ideas will require comprehensive plans that, among other things, enumerate specific actions, clarify roles, and identify needed resources. That work lies ahead.

Apart from any specific course of action, we hope this paper and EducationCounsel's earlier report help stakeholders throughout the system appreciate the need for a transition to a learning system approach, understand what such a system should look and feel like, recognize the challenges and gaps in our current system, and have confidence that there are steps everyone can take to advance the cause.