

How Innovative Learning Models Can Transform K-12 Education



Joel Rose, Jeff Wetzler, and Jenee Henry Wood

Executive Summary



Education can make all the difference in the life trajectory of a young person. It can open their minds, reveal their talents, drive their future economic mobility, and provide them with tools to safeguard democracy.

For more than 100 years, our nation's central approach to schooling has oriented around an individual teacher guiding the instruction of a cohort of same-aged students through a uniform curriculum, often with the aid of a textbook. We call this approach to schooling the "industrial paradigm" because it was patterned after the standardized ways in which factories operated during the industrial era. At the time, it was considered the most efficient way of supplying a culturally assimilated, factory-ready workforce that was able to perform repetitive tasks, follow directions, and apply basic numeracy and literacy skills.

Since then, the creation and scale of over 100,000 schools based on the industrial paradigm has been one of our nation's most impressive historical achievements, providing millions of young people with many of the opportunities that education affords.

However, high-quality education within this industrial paradigm has not always been accessible to all students. The quality of education has varied greatly most notably across racial, economic, and geographic lines. Over time, advocates have worked tirelessly to address these inequities, earning hard-fought victories in areas such as school integration, funding, special education, early childhood, and food and health services so all young people can have a fair chance. Building on that progress, reformers in more recent decades expanded options, elevated expectations, improved curricula, developed new technologies, improved human capital pipelines, and more. Each of these efforts has moved the sector forward and created new and better opportunities for countless students.

Factories in the early twentieth century needed workers with a basic set of skills, and the most efficient way to get them was through an educational delivery model patterned after the factory itself.



The Factory



The Factory-Model Classroom

At the same time, many of these efforts have faced limitations, have been hard to scale or sustain, and, in some cases, have had unintended consequences. While there are hundreds of examples of schools, school networks, initiatives, and programs that can validly point to evidence of meaningful success, national-level measures of student performance have largely plateaued.¹ And while graduation rates have somewhat improved, still only about one-third of students graduate high school ready for college or a career.²

We believe the ultimate impact of many worthy reform efforts has been hindered by key elements of the industrial paradigm itself. Higher grade-level standards, for example, can help to ensure higher levels of academic rigor, but provide little guidance when students begin a school year multiple years behind. Good teacher training can make a big difference for the students they serve, but when skilled teachers burn out trying to fill a fundamentally unsustainable role, it is back to square one with a new teacher. Formative assessments can illuminate specific needs for each student, but operationalizing a unique academic plan for each of them is nearly impossible for an individual teacher.

In recent years, COVID-19 unleashed multiple new challenges for schools to confront, including the need to address its profound impact on students' academic and mental health. Teachers bear this burden, along with all of their other responsibilities, given the design of their role in the industrial paradigm. For many teachers, this role was unsustainable even before the pandemic. Now, these additional responsibilities and challenges are causing them to leave the profession.

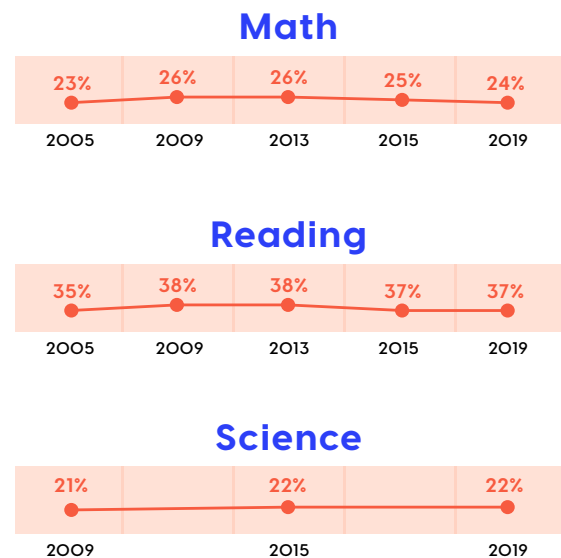
While it is vital to address immediate challenges, it is also critical to begin focusing on a longer-term vision for schooling. This new vision must move beyond the constraints of the industrial paradigm so the sector can reliably and systematically provide our nation's youth with an education that enables all of them to realize their full potential.

What might a new, student-centered paradigm of schooling look like?

Imagine, for example, elementary classes that deeply embed the science of reading, making use of phonics instruction to the degree appropriate for each student and using technology and artificial intelligence to support building the requisite vocabulary and content knowledge to access rigorous text. In middle-grade math, imagine sophisticated diagnostic assessments generating a personalized learning plan that adapts daily and allows each student to drive their own progress using a variety of learning modalities (e.g., teacher-led, collaborative, and independent). Science and social studies classes could integrate combinations of text, virtual reality, group discussion, and interdisciplinary projects that extend beyond what an individual teacher could sustainably plan for each day.

For all of these subjects, instruction could happen inside or outside of the school, and in ways that build both individual student agency and a strong sense of community. Assessments could be reliably embedded within

Percent of US Students Proficient and Above (12th Grade NAEP)



Source: NAEP Data Explorer



the students' learning experiences in order to provide helpful, real-time information to both teachers and to systems leaders, rather than thought of as a separate event.

These kinds of advances reflect just the beginning. Breakthroughs in brain science, artificial intelligence, and other advances in technology are continually opening up new possibilities to both support student learning and make educator roles more attractive and sustainable. However, just as an engine has little value atop a horse and buggy, truly realizing new possibilities requires fundamentally reimagining elements of existing paradigms in order to transition to something new and better.

The K-12 sector is not built to organically enable this type of paradigm shift. School operators generally do not have the design capacity to alone fundamentally reimagine learning—particularly if that involves sophisticated uses of technology. Nor do individual

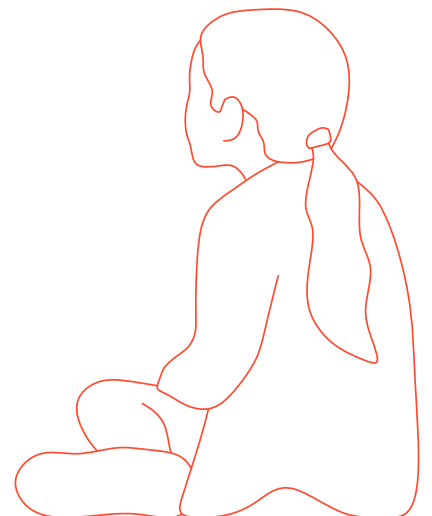
teachers, who simply cannot be expected to design the classroom of tomorrow while also managing the classroom of today. And unlike in sectors such as energy, defense, and healthcare, there is not a robust ecosystem of organizations focused on building for the future.

That is why making the shift to student-centered learning is going to require a new type of coordinated effort centered on reimagining what schooling can be and then bringing that vision to life.

We are not the first ones to call for concerted action aimed at moving away from the industrial paradigm. In the 1990s, a federal initiative called New American Schools (NAS) funded the development of organizations to create designs that would “break-the-mold,” while then helping schools implement those designs. While the initiative had some successes that continue to this day, many of the models it spawned ultimately reflected modest deviations from the industrial paradigm of schooling.³ (More on NAS can be found on page 40).

Now is the time to revisit the basic premise of NAS in order to comprehensively address today's challenges. The tools and know-how now available to support modernizing our national approach to schooling—from the internet to artificial intelligence to advancements in learning science to innovative approaches—go far beyond what was available thirty years ago.⁴ Profound losses and severe staffing shortages also changed the national context over the past two years, creating a national imperative to ensure the challenges facing schools today do not become permanently entrenched.

But advances in technological capacity and know-how are not enough to facilitate the transition to a student-centered paradigm. If it were, breakthrough innovations such as television, the personal computer, and the internet would have had a more pronounced impact on education over the last century than most evidence suggests they have. Instead, renewed efforts aimed at true system modernization must comprehensively address the three primary forces that have collectively kept the industrial paradigm intact.



First, our nation's decentralized system for education governance allows local communities to play a significant role in decisions about schooling. There is great benefit to this, given the uniqueness of each local context and the perspectives that stakeholders (including students, families, educators, administrators, and other community members) have around their values, needs, and experiences. However, the educational visions they set for their young people can readily be limited to what is most familiar. Even when school communities articulate bold visions, they rarely have the capacity or risk tolerance to design and build what it takes to actualize them. As such, they are left to debate and decide about changes and solutions *inside* of the industrial paradigm, rather than pursue a fundamentally better way.

Second, there is a lack of solutions for schools looking to transition to a student-centered paradigm. Many of the products purchased by schools can be effective in addressing specific school needs: a better history textbook, an interactive whiteboard, or an electronic gradebook, for example. However, in order for products to be adopted at scale (a goal strongly encouraged or required by funders or investors), they must also fit inside the current design of a typical school. As a result, these solutions—and the hundreds of millions of dollars that support them—typically serve to reinforce, rather than challenge, the industrial paradigm of school.

And third, the K-12 landscape itself has fortified the industrial paradigm by developing a host of policies, practices, and priorities designed to encourage incremental progress. Because they must be immediately implemented within today's system and face pressure to show immediate results, they have the effect of buttressing the industrial paradigm's constraints, making it harder for innovative educators to move beyond it. As a result, a regulatory landscape that incorporates everything from textbook adoption to credit requirements to staffing structures to accountability systems to school improvement plans creates a cumulative level of inertia that can seem daunting to overcome.

Together, these three forces—community demand shaped by what's most familiar or feasible, program supply constrained by what's most scalable, and a K-12 landscape designed to optimize performance within today's industrial paradigm—have collectively made it nearly impossible for school communities to escape its grip.

Overcoming these formidable obstacles can best be done when key stakeholders in local school communities come together to develop a new vision, unconstrained by the assumptions of the industrial paradigm, for what they want young people to experience and what learning outcomes they aspire for them to have attained upon graduation. In some communities, these aspirations are centered on greater levels of personalization and more relevant learning experiences. Others are focused on greater identity affirmation and a deeper integration of academic and social-emotional development. Still, others seek the opportunity for learning to take place anytime and anywhere and for

WHAT KEEPS THE INDUSTRIAL PARADIGM IN PLACE

K-12 Landscape Designed to Optimize Performance Within the Industrial Paradigm Itself

Program Supply Constrained by What's Most Scalable

Community Demand Shaped by What's Most Familiar



INDUSTRIAL PARADIGM CLASSROOM

students to accelerate in ways that are divorced from the traditional, grade-level pathway. Regardless of their focus, the act of inclusively engaging stakeholders in local communities is essential for building the conditions required to sustain a transition to a student-centered design.

As school communities come to articulate their vision, they will most often need to work with a set of partners to bring their vision to reality. Schools and districts are built and resourced to operate schools, not necessarily to redesign them. Thus, in order for schools to deliver on their aspirations, we are highlighting the need for a new type of organization, an **innovative model provider**, to support school communities in actualizing the visions they set forth.

Innovative model providing is centered on the idea that the tools and resources available to support a profound shift from the industrial paradigm must be thoughtfully woven together into comprehensive and intentionally designed programs which schools can adopt, adapt, and integrate in order to actualize their vision.

That type of program, which may be called a **learning model**, integrates:

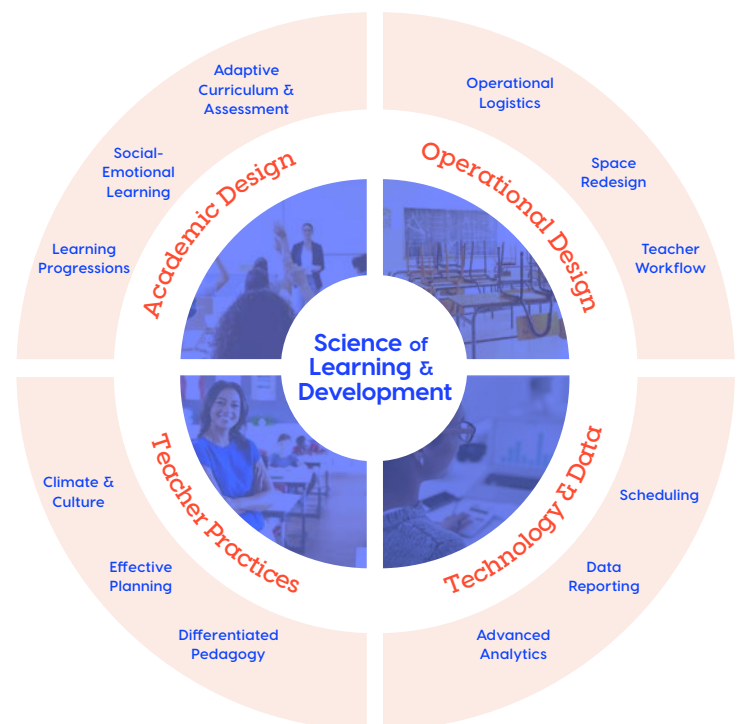
- an instructional design that thoughtfully incorporates components such as content, assessment, educational research, and cognitive science;
- an aligned set of pedagogical practices that is sustainable for teachers and leverages what they are uniquely suited to do;
- an operational design that reimagines teacher workflow, the use of time, and classroom design; and
- a technological design that embeds the use of student-level data and relevant technological tools to realize the model's vision.

Model providers are organizations that design new learning models for different subjects and grade spans through extensive research and development. To do so, they assemble the diverse talents of educators, technologists, researchers, experts in child and adolescent development, creatives, and others to deeply understand what school communities want their students to experience. This allows them to partner closely with innovation-minded school communities, including students and families, to develop and iterate on models that reflect local aspirations and that can ultimately be sustained with public resources.

As these models become more mature, model providers then partner with a broader number of school communities that share similar aspirations for their students and that want to support a local implementation. In doing so, both the model provider and the partner school have explicit and complementary roles to play in the process, and both parties then share in the responsibility for the resulting student outcomes.

Unlike charter schools, which are focused on whole-school management, model providers are organizations that work closely with existing schools regardless of their governance structure. Whether in the design phase or in the

Innovative Learning Models





implementation phase, participating teachers remain on the payroll of the school operator, but they engage with the model provider for many of the corresponding instructional materials and professional support services.

We are leaders at two organizations who spent the last several years working to develop the model provider sector in different ways. Our work builds on the foundation set by organizations such as New Schools Venture Fund, which has been especially vital to the birth of model providing through its direct support for model providers and through the frameworks and guidance it released.⁵ We are also grateful to other organizations such as the Clayton Christensen Institute, New Profit, the Aurora Institute, and the Learning Accelerator, as well as local and national education foundations whose support helped to seed the model provider sector.

Through our collective work, we have come to understand both the promise of innovative learning models and the profound impact they can have on the education system—especially when adopted by school communities that have defined their aspirations, built local conditions for change, and selected models aligned with those ideals. But those schools are far more the exception than the rule: a century of operating

within the industrial paradigm has created fixed mindsets, inflexible policies, and organizational power dynamics that can all make moving beyond the industrial paradigm far more difficult than one might hope. No matter how impactful, how adoptable, and how sophisticated innovative learning models can be, a broad-based transition to a student-centered paradigm will depend on educators, local communities, philanthropists, systems leaders, and policymakers creating the conditions for schools to overcome these barriers and embrace a modernization agenda. This means that a coalition for collective action that is far bigger than any single organization—including our own—will be required to overcome historical challenges of scaling and sustaining change in education systems.

We have organized this plan into four sections:

The Introduction, “Thinking Outside the Box,” describes why the pandemic provides a watershed moment to revisit the core assumptions around schooling.

Part One, “Seeing the Box,” makes the case for why innovation toward a student-centered paradigm is essential to turning the page on the industrial model to schooling, given its inherent limitations.

Part Two, “Getting Out of the Box,” defines innovative learning models and describes how they are developed and adopted.

Part Three, “Moving Beyond the Box,” lays out recommendations for how leaders from government, philanthropy, and school systems can help realize the potential of innovative learning models at scale.

Model providing is one approach for addressing the structural barriers to the widespread adoption of a student-centered paradigm.⁶ We welcome and value the introduction of other ideas and approaches aimed at reaching the same ends.

Barriers & Recommendations

Barriers

Recommendations

Supply

High entry barriers and low entry incentives for becoming model providers

The dearth of investment in education research and development

Lack of capacity required to support widespread distribution and support

School Operators:

Launch a model design team.

Federal Policymakers:

Invest in the development of innovative learning models and in the organizational capacity of model providers.

State Policymakers:

Invest in the development of innovative learning models and in the organizational capacity of model providers.

Philanthropy:

Invest in the identification, organizational capacity, and success of model providers.

Education Advocates:

Advocate for policies that support the incubation and support of model providers.

Potential Model Providers:

Existing Organizations:

Examine existing solutions and consider what would be needed for them to become innovative learning models.

Entrepreneurs:

Consider launching a new organization focused on model providing.

Demand

Systemic inertia rooted in stakeholder mindsets

Conditions that are insufficient to overcome systemic inertia

School operators lack an awareness or understanding of model providing

Incongruous cost structures

School Operators:

Engage school communities around the development of a shared vision for the future.

Ensure internal structures, policies, and stakeholders are aligned in support of model adoption.

Explore and budget for the adoption of innovative learning models as a primary or supplemental curricular offering.

Federal Policymakers:

Fund the early adoption of innovative learning models.

State Policymakers:

Launch statewide efforts such as Innovation Zones to further accelerate the adoption of innovative learning models within a defined regulatory structure.

Philanthropy:

Invest in the initial demand for innovative learning models in local or national contexts.

Education Advocates:

Encourage local school operators to explore innovative learning models and consider their adoption.

Landscape

Systemic inertia rooted in policies and practices

Lack of a place where supply and demand can meet

School Operators:

Encourage states to revise procurement policies, examine regulations, and create permission structures for innovative learning models to emerge.

Federal Policymakers:

Create regulatory space within federal policy for innovative learning models to emerge.

State Policymakers:

Create opportunities for school operators to explore, engage, and partner with model providers.

Create regulatory space within state policy for innovative learning models to emerge.

Philanthropy:

Invest in the ecosystem required for model providing to succeed, including the advocacy for enabling federal and state policies.

Education Advocates:

Advocate for policies that shift the state and local landscape in support of innovative learning models.