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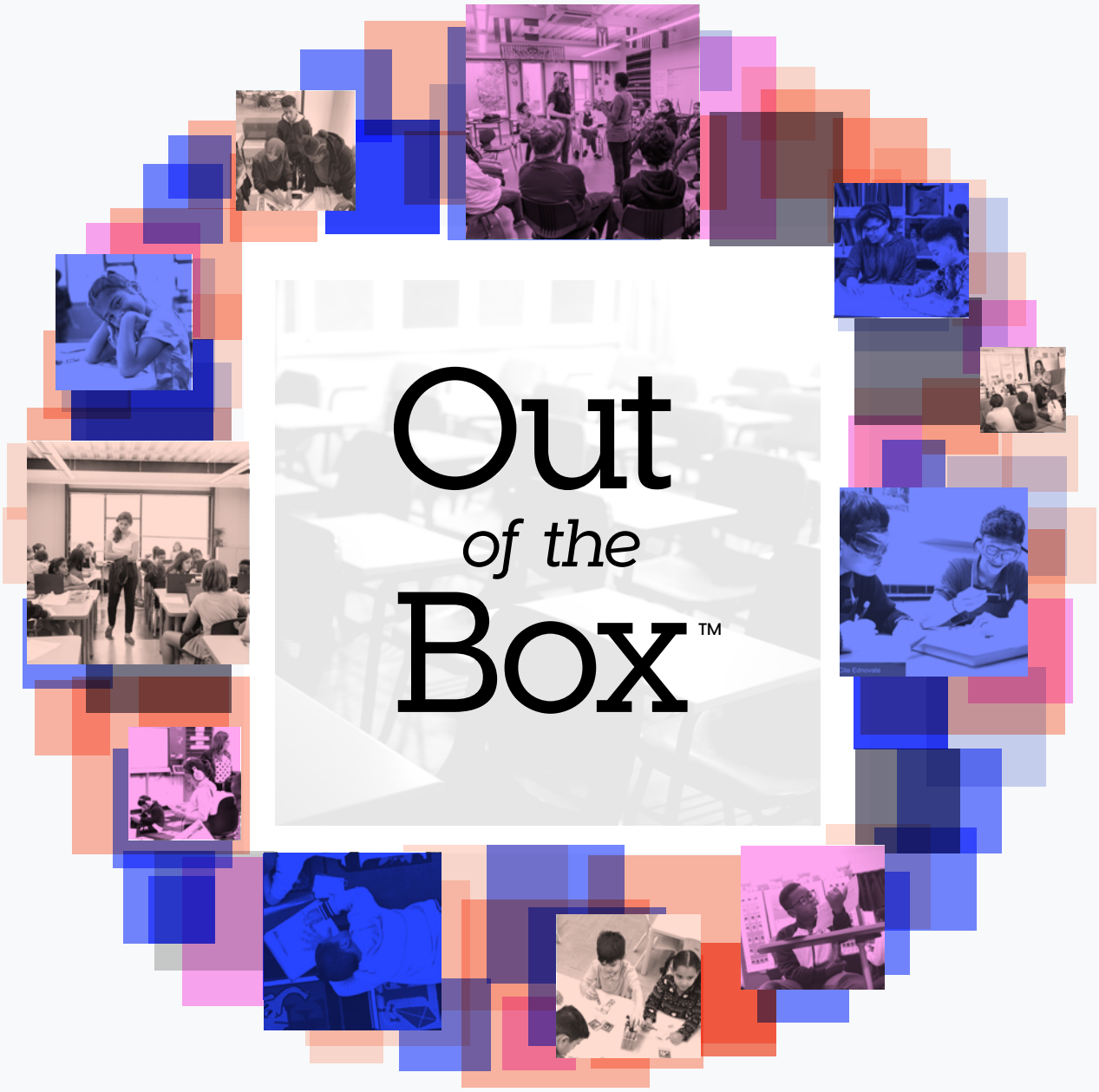

Out of the Box™

How Innovative Learning Models Can Transform K-12 Education

NEW CLASSROOMS

Transcend
BUILDING BEYOND THE LIMITS OF SCHOOL DESIGN

Joel Rose, Jeff Wetzler, and Jenee Henry Wood

We are grateful to the many educators, policymakers, researchers, and education-sector leaders who contributed to our thinking on this project. Their willingness to set aside time for robust and thoughtful discussions on policy, research, and practice substantially enriched this work. We are also particularly grateful to the teachers and school leaders we have all learned from these many years.

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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

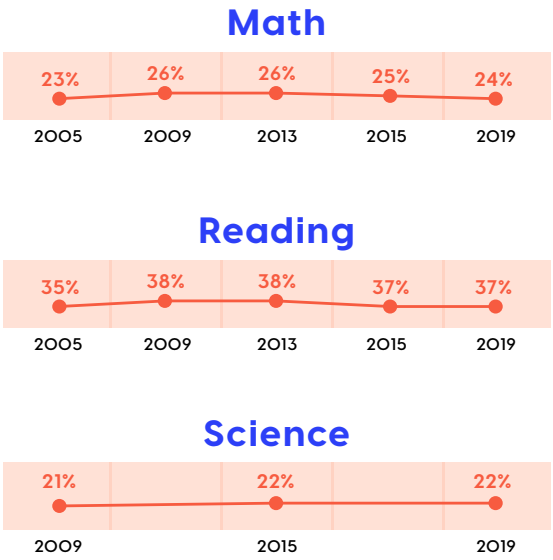
The Factory-Model Classroom

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.

Percent of US Students Proficient and Above

(12th Grade NAEP)



Source: NAEP Data Explorer

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

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.

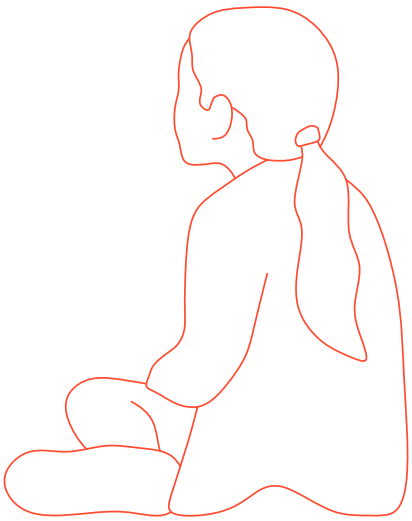
These kinds of advances reflect just the beginning. Breakthroughs in brain science, artificial intelligence, and other advances in technology are continually opening up new possibilities to both support student learning and make educator roles more attractive and sustainable. However, just as an engine 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.

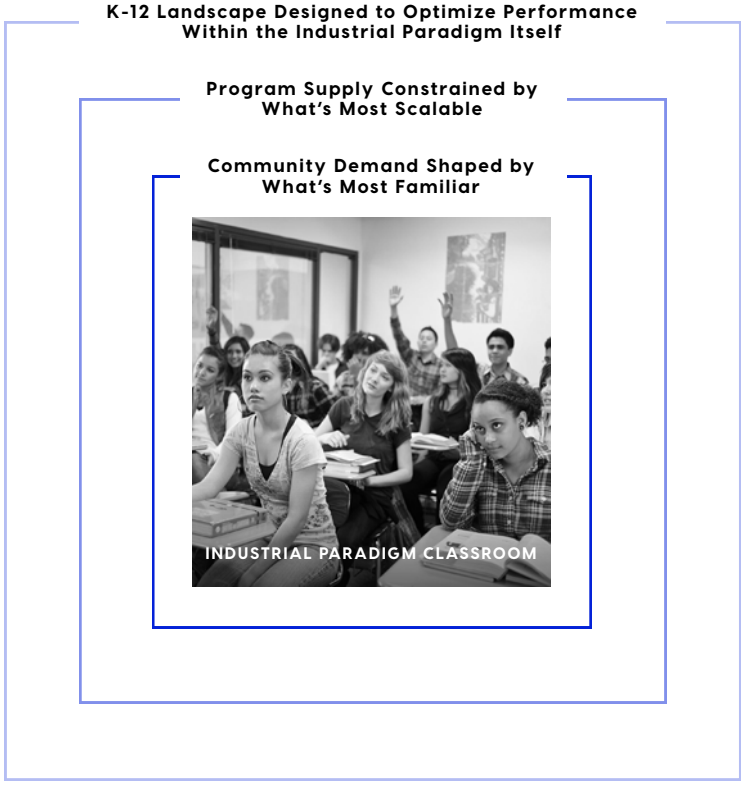
Second, there is a lack of solutions for schools looking to transition to a student-centered paradigm. Many of the products purchased by schools can be effective in addressing specific school needs: a better history textbook, an interactive whiteboard, or an electronic gradebook, for example. However, 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

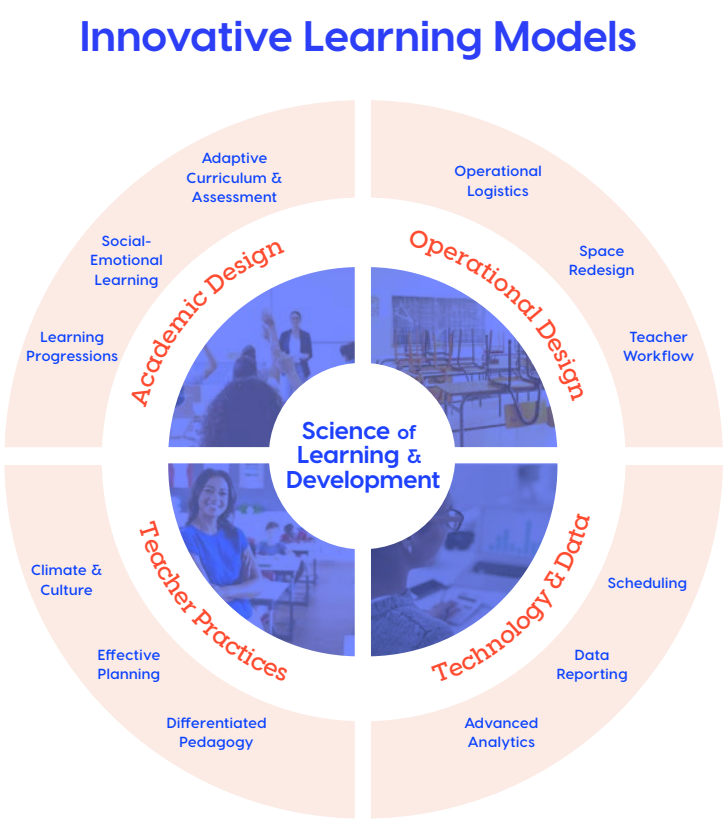


students to accelerate in ways that are divorced from the traditional, grade-level pathway. Regardless of their focus, the act of inclusively engaging stakeholders in local communities is essential for building the conditions required to sustain a transition to a student-centered design.

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

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

Supply

Barriers

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

Recommendations

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

Barriers

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

Recommendations

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

Barriers

Systemic inertia rooted in policies and practices

Lack of a place where supply and demand can meet

Recommendations

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.

Introduction

Thinking Outside of the Box

In the middle of the twentieth century, maritime trade operated much as it had operated for more than 3,000 years, with goods in varying size and weight getting loaded and unloaded by hand at local ports. The process was time consuming and costly, often leading to damage and theft. This was true whether the labor was provided by the Phoenicians in 1500 BCE or by longshoremen in San Francisco in 1940.

But in the early 1950s, a trucker from North Carolina named Malcolm McLean thought it might be possible to bypass the increasingly congested interstate highways and instead put the containers from his trucks directly onto ships. Upon arrival at their destination, these containers could then be readily reloaded onto trucks or placed onto trains. He committed to this vision, sold his trucking company, and launched a shipping company that would ultimately bring about a new level of standardization and interoperability to the sector.[7]

McClean's paradigm-shifting idea was met with sharp resistance from shipping companies, regulators, and unions that were all accustomed to the industry's long-standing norms. Nonetheless, he persisted by converting war tankers into cargo vessels, retrofitting cranes to support loading, and opening ports.[8] Over the next several decades, the shipping container would fundamentally alter and interconnect the global economy, making shipping far more efficient and secure. Today, an estimated $14 trillion in goods spend some time inside of a big metal box.[9]

The story of Malcolm McClean is not only about the impact of a physical box. It is about the importance of thinking outside of one—and forcing others to do the same. The breakthrough inventions that fuel transformative societal progress in sectors such as health, energy, and communications are often the product of setting aside conventional wisdom, reexamining underlying assumptions, and exploring ways to deploy modern technologies to long-standing challenges.

It is past time to employ this same thinking to K-12 education.

Our nation's schools have been locked into the industrial paradigm of schooling, its own box, since the middle of the nineteenth century. It too is characterized by well-established traditions, fixed mindsets, entrenched interests, and a failure to imagine new ways of addressing persistent challenges.

The story of Malcolm McClean is not only about the impact of a physical box. It is about the importance of thinking outside of one—and forcing others to do the same.

The COVID-19 pandemic fully laid bare implications of continuing to rely on an approach to educational delivery rooted in the design and know-how from the Industrial Revolution. While many other sectors spent the last twenty years modernizing their core delivery models to leverage the internet and other modern technologies, the K-12 sector doubled down on efforts to try to optimize impact within the industrial paradigm of schooling, focusing on standards, teacher quality, curriculum, and accountability. As schools and communities shut down, many of the sectors that focused on modernization were able to thrive: the general public was still able to shop, watch movies, bank, and do much of what it could do twenty years prior, albeit more conveniently and effectively. But teachers were forced to scramble to bring their industrial-era classrooms online or to somehow make it work in a hybrid context. With little design and support behind them, they did as well as one could hope.

The results have been devastating for all students, but particularly for Black, Hispanic, and Indigenous communities. One study from McKinsey found that in the 2019–20 school year, elementary students learned 67% of what they would have otherwise learned in math and 87% of what they would have otherwise learned in reading.[10] In schools that predominantly serve students of color, learning losses were more acute—59% and 77% respectively.[11]

Parents had a front-row seat to remote and hybrid learning and came away frustrated. They saw how student motivation was a particular challenge: without the advantages of physical presence, many students struggled to drive their own learning, did not sufficiently engage, and fell further behind. But parent frustration seemed to extend beyond schools' pandemic-related shortcomings and more toward how schools were managing learning in general. One survey revealed two-thirds of parents worry about their child staying on track in school.[12] Another revealed they now want to see more fundamental change in how schooling happens.[13] It found that support was strongest for education leaders who prioritize relevant and real–world learning experiences, improved technology to better support instruction, greater customization to meet varied learning needs, and tools to support students' mental and emotional health.[14]

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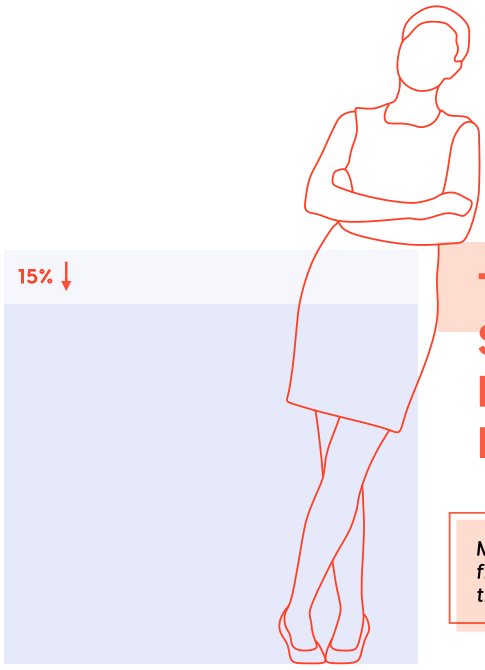
Teachers are ready for more fundamental change, too. Before the pandemic, teacher satisfaction reached its lowest level in two decades.[15] This may be one reason why the nation's two largest national labor unions have explicitly called for efforts to reimagine education in order to "meet all learners where they are and allow each to reach their full potential."[16] Now, labor shortages are ubiquitous and more than a third of teachers are considering quitting.[17] The pandemic forced

teachers to become more comfortable using technology, but the burden for reimagining what a classroom can look like cannot solely fall on their shoulders—there is already far too much they are asked to do.

The same holds true for system leaders. Calls for new approaches that allow students to progress at their own pace are now coming from some of the nation's most prominent school superintendents, who are demanding a competency-based educational system that looks nothing like the current model.[18] Many have also experienced steep drops in enrollment to virtual schools or other out-of-system options and recognize the need for more profound innovation in the ways in which they operate.[19] Their primary levers of systemic reform have been limited to those focused on improving school governance, the capacity of teachers and leaders, and the adoption of new curricular solutions—all of which have resulted in highly variable student experiences and none of which have yielded the kind of transformative shifts in student outcomes necessary to enable true social mobility.

Perhaps no group has more to gain from a transition to a student-centered paradigm than students themselves. Prior to the pandemic, nearly one in three teens reported being bored all or most of the time, and a majority reported high levels of stress.[20] Students are the ones who must endure the often mind-numbing experiences that the industrial paradigm creates: the waiting on bells to release them from one class to the next, the rote memorization, the feelings of irrelevance ("Why do we need to learn this?"), the sense that school just is not engaging or doesn't work for them, and the untapped potential and passions that school simply ignores or—worse—suppresses.

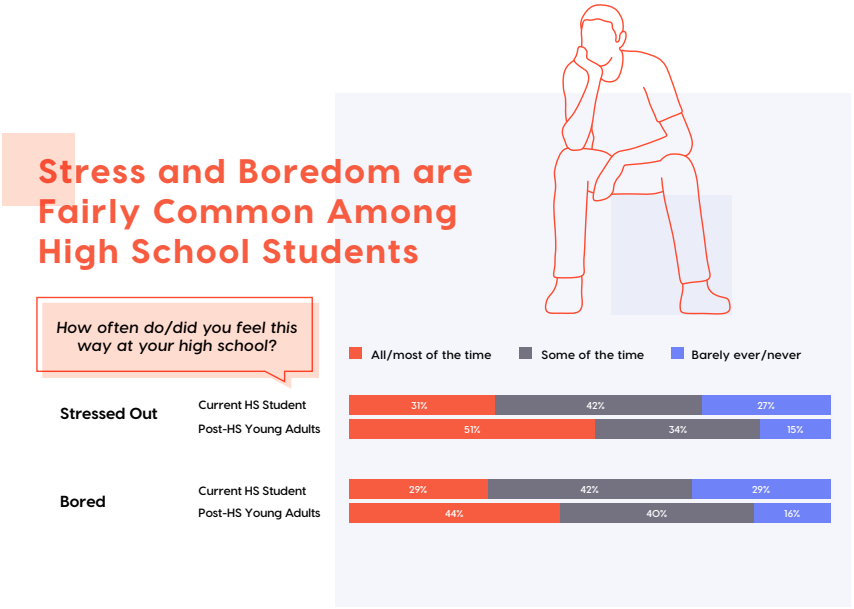
Our national system of schooling now finds itself at a crossroads. The pre-pandemic challenges centered on overall system performance are now compounded by even more pressing issues: devastating losses in learning,



Teacher Job Satisfaction Has Fallen by 15 Percentage Points

MetLife survey queried teachers on this topic, from 59 percent to 44 percent responding they are very satisfied

The pandemic forced teachers to become more comfortable using technology, but the burden for reimagining what a classroom can look like cannot solely fall on their shoulders—there is already far too much they are asked to do.



profound shortages in labor, and parent demands for greater levels of both personalization and mental health support. Addressing all of these needs is well beyond the bounds of what the industrial paradigm of schooling was ever designed to do.

Our national choice is clear: We can continue to define change as it has been defined for the last forty years—tacitly accepting that the industrial paradigm of schooling is still the best way of providing education and focusing on the *optimization* of its impact by trying to incrementally improve its core elements. Or, we can consider the possibility that the industrial paradigm itself is what must transform. Even though it was designed more than a century ago, the die it cast has severely limited the impact of well-intended efforts aimed at systemic improvement. Transcending these inherent limitations requires *modernization*—the development of a new paradigm for schooling that fundamentally reimagines the classroom itself so each student can fulfill his or her full potential.

Students are the ones who must endure the often mind-numbing experiences that the industrial paradigm creates: the waiting on bells to release them from one class to the next, the rote memorization, the feelings of irrelevance.

From an Industrial Paradigm to a Student-Centered Paradigm

In this section, we distinguish between two "paradigms" of education: the *industrial paradigm* and the *student-centered paradigm*. For each, we discuss a set of features inherent to it, including:

- the **purpose** of education that animates the paradigm,
- the **fixed design** tenets that govern how schooling is delivered within that paradigm, and
- the **resulting experiences** of students in that paradigm, which we believe emanate from the paradigm's purpose and fixed design tenets.

While the distinctions between the two paradigms are not always truly binary, we paint the differences between these paradigms as starkly as possible to illustrate the profound shifts we believe are required.[21]

Understanding the Industrial Paradigm and its Inherent Limitations

Purpose

The industrial paradigm emerged to massively increase access to education and to rank and sort young adults into factory or agricultural jobs for a booming economy. Many men worked blue-collar jobs as mechanics, plumbers, bus drivers, warehouse workers, and road construction workers. During the first forty years of the twentieth century, women with high school diplomas increasingly found work in offices as secretaries and clerks.[22] The fact that only one in four adults graduated high school in 1920 made little economic difference since nearly 40% of all jobs were in a booming industrial economy, all of which could be performed with a high school–level education.[23]

The purpose of the industrial paradigm was not to provide a high-quality education for all students—particularly not for women or for students of color. With few exceptions, schools were hardly expected to serve Black students at all.[24] Asian, Hispanic, and students of other ethnicities and faiths, meanwhile, faced discriminatory and exclusionary policies and practices.[25] Students were tracked into educational and/or career paths based less on their aptitude than on their family's affluence, race, ethnicity, or social connections.[26] Immigrant education in large cities was focused on cultural and national assimilation.[27]

The purpose of the industrial paradigm was not to provide a high-quality education for all students – particularly not for women or for students of color.

Fixed Design Elements

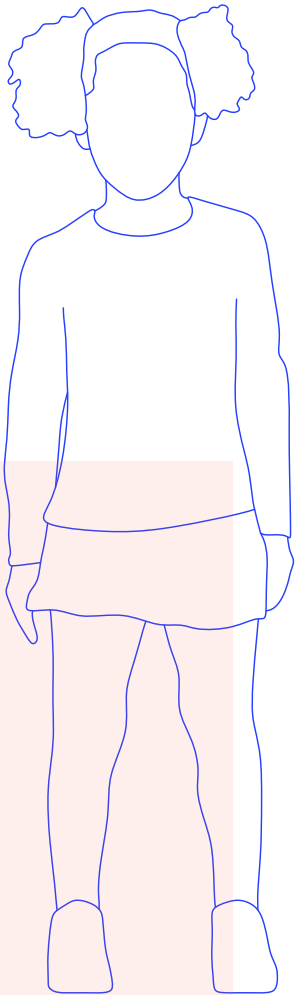
To fulfill this core purpose, schools were designed with the following fixed design tenets:

- Instruction would be organized around cohorts of same-aged students who would be assigned to a particular grade level (the age-graded classroom), with students progressing based on time rather than mastery
- Each grade level would focus on a uniform sequence of content for all students, organized by academic disciplines and codified in textbooks
- Teachers would direct learning, which would happen inside physical classrooms

Practically, these fixed design elements have had two profound consequences for more than a century.

First, they advanced fulfilling the core purpose of ranking and sorting students; a standardized, one-size-fits-all approach continues to winnow out those who cannot keep up.

Second, they logistically constrained the application of any future instructional innovation to whatever an individual teacher can readily use in the context of the age-graded classroom. Today, that means many of the breakthroughs in cognitive research or advanced technologies that could otherwise impact individual student learning, simply cannot be leveraged because they do not fit within these fixed elements.



Resulting Student Experience

When the fixed design elements of the industrial paradigm is brought to life across the roughly 130,000 U.S. schools, it shapes students' experiences in school in profound and uneven ways. We believe the resulting student experiences it produces are best reflected in Transcend's description of industrial-era learning.[28]

1. Unequal Expectations & Opportunities
The expectations and opportunities learners experience are determined at a young age and are modest for most, high for some, disproportionately low for others, and too often based on factors connected to a learner's identity and background.

2. Narrow Focus
Learners engage in experiences focused primarily on the cognitive dimension of learning.

3. Rote Activities
Learners engage in memorizing and recalling a broad array of content and are assessed primarily on their ability to recall and explain this information.

4. Irrelevance
Learning is disconnected from young people's interests and goals, as well as the real professional, personal, and societal challenges and endeavors they encounter in life.

5. Assimilation & Marginalization
Learners from marginalized groups—such as people of color, LGBTQ learners, those living in poverty, multilingual learners, those with a disability, and others—are pushed to either conform to the dominant culture or risk alienation.

6. Reinforcement of the Status Quo
Learners' experiences are situated within societal structures related to race, class, gender, sexual orientation, ability, and more that are implicitly accepted, directly perpetuated, or studied in ways that do not motivate massive change efforts.

7. Isolation
Building strong relationships is not prioritized; learners and adults work together in the same space, but often without knowing one another deeply, and teaching and learning approaches prioritize independent work and competition.

8. Inflexible Systems
Learners experience rigid structures and policies that batch those of the same age together and engage them in the same content through the same activities at the same pace—holding some learners back from more advanced content and activities and leaving others behind.

9. Passive Compliance
Learners are expected to passively absorb the knowledge, skills, mindsets, and behaviors modeled and taught by adults and are pushed to comply with rules and routines developed for them through extrinsic rewards and punitive consequences.

10. Siloed Schooling
Learning is largely confined to school—a physical space with a fixed schedule and teachers who take on all, or most of, the responsibility for educating students—and learning outside of school is far more available to those with substantial economic and social capital.

While there is undoubtedly variation from classroom to classroom, on the whole, these experiences directly emanate from the purpose and fixed design elements of the industrial paradigm when implemented at scale.

Imagining a Student-Centered Paradigm and Its Inherent Opportunities

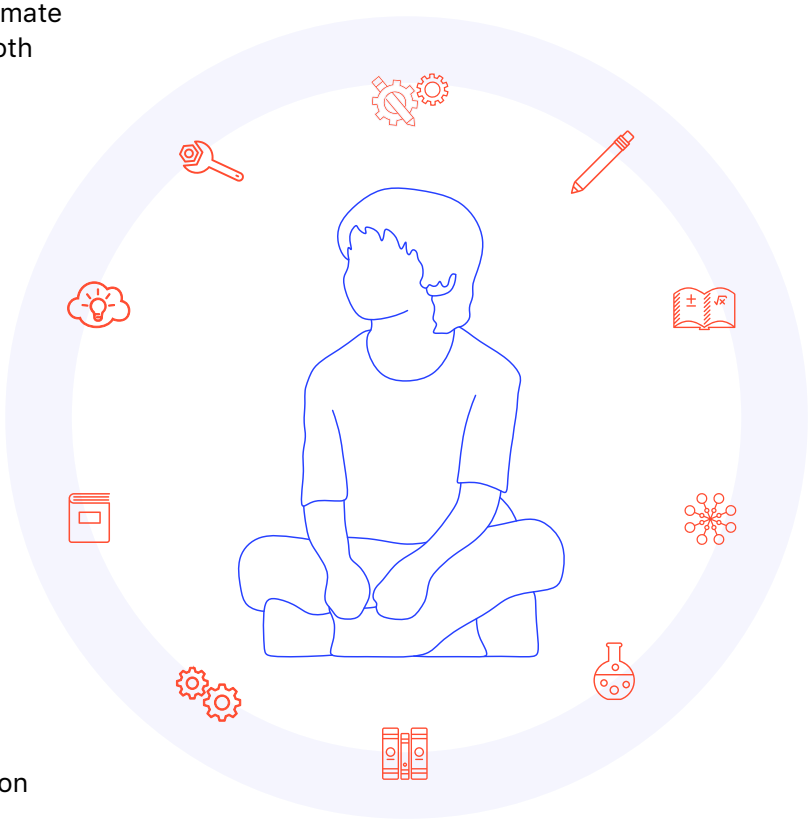
If students' experiences in schools were not shaped so deeply by the fixed design elements of the industrial paradigm, how might they be different? What would they look like? And how would they be brought to life?

Purpose

Because a student-centered paradigm is not rooted in the legacies of ranking and sorting, it can be designed around a very different purpose—one we believe should be centered on ensuring **a high-quality education for all students in order to unlock their full potential to thrive and contribute to the world around them.**

Success in achieving this broader purpose would be reflected in a wider set of indicators than in the industrial paradigm. Success would still reflect strong levels of growth and mastery in academic realms, including reading and math, and this paradigm would not accept as success any disparities in accomplishment based on factors such as race, class, or any other identity markers.

But this is only the beginning, not the stopping point. In a student-centered paradigm, success is marked by learners finding their personal pathway through multiple, unique channels of intellectual and personal growth, as well as economic mobility and access. The ultimate goal of this paradigm is for students to thrive—both during their formal education and in what comes after—not only for the sake of their personal benefit, but so they can contribute to their communities and others around them.



Fixed Design Elements

A student-centered paradigm could incorporate design elements that are unconstrained by fixed requirements for age-grade, teacher-directed, whole-class instruction. Freed from that limitation, designs within a student-centered paradigm can then focus directly on the experience students would have in order to achieve this new purpose.

Resulting Student Experience

We believe Transcend's Ten Leaps for Twenty-First-Century Learning provide the best articulation of how the resulting student experience within the industrial paradigm contrasts with what students experience in a student-centered paradigm.

10 Leaps for Twenty-First-Century Learning

Industrial Paradigm	Student-Centered Paradigm
Unequal Expectations & Opportunities The expectations and opportunities learners experience are determined at a young age and are modest for most, high for some, and disproportionately low for others, too often based on factors connected to a learner's identity and background.	**High Expectations with Unlimited Opportunities** All learners experience high expectations and have equitable access to many opportunities, enabling them to progress toward their aspirations for themselves, their families, and the community—regardless of the time and support needed.
Narrow Focus Learners engage in experiences focused primarily on the cognitive dimension of learning.	**Whole-Child Focus** Learners engage in experiences that nurture the totality of cognitive, emotional, social, and physical factors that impact their learning, development, character, and overall health and well-being.
Rote Activities Learners engage in memorizing and recalling a broad array of content and are assessed primarily on their ability to recall and explain this information.	**Rigorous Learning** Learners use critical thinking skills to make deep meaning of diverse, complex ideas and are assessed on their ability to apply, analyze, and use their knowledge in creative ways across contexts
Irrelevance Learning is disconnected from young people's interests and goals, as well as the real professional, personal, and societal challenges and endeavors they encounter in life.	**Relevance** Learning explores young peoples' interests and goals, is connected to their communities, and enables them to understand and tackle real problems in authentic contexts.
Assimilation & Marginalization Learners from marginalized groups—such as people of color, LGBTQ learners, those living in poverty, multilingual learners, those with a disability, and others—are pushed to either conform to the dominant culture or risk alienation.	**Affirmation of Self & Others** Each learner develops a unique, positive sense of self and purpose as well as a deep respect for the identities of others; these diverse identities are celebrated, nurtured, and leveraged in meaningful and anti-oppressive ways to support everyone's learning.
Reinforcement of the Status Quo Learners' experiences are situated within societal structures related to race, class, gender, sexual orientation, ability, and more that are implicitly accepted, directly perpetuated, or studied in ways that do not motivate massive change efforts.	**Social Consciousness & Action** Learners critically examine social problems and work toward a more just world; they develop the knowledge, skills, and mindsets needed to continue taking anti-oppressive actions that disrupt and dismantle racism and other inequities.
Isolation Building strong relationships is not prioritized; learners and adults work together in the same space, but often without knowing one another deeply, and teaching and learning approaches prioritize independent work and competition.	**Connection & Community** The environment is relationship-rich: learners are deeply known and respected by a variety of adults and peers; collaborate closely; and form meaningful relationships across lines of difference that nurture empathy, foster belonging, support well-being, and build social capital.
Inflexible Systems Learners experience rigid structures and policies that batch those of the same age together and engage them in the same content through the same activities at the same pace—holding some learners back from more advanced content and activities and leaving others behind.	**Customization** The focus, pace, and sequence of learning, as well as the resources and supports provided, are tailored to each learner's identity, prior knowledge, development, way of learning, and life experiences, ensuring that all learners have what they need to be successful and those who need more receive more.
Passive Compliance Learners are expected to passively absorb the knowledge, skills, mindsets, and behaviors modeled and taught by adults and are pushed to comply with rules and routines developed for them through extrinsic rewards and punitive consequences.	**Active Self-Direction** Young people are active drivers of their learning; they grapple directly with concepts while receiving adult and peer guidance and support; they have a voice in decisions about how and what they learn, so that the process grows agency and meaningfully builds on their interests and prior knowledge.
Siloed Schooling Learning is largely confined to school—a physical space with a fixed schedule and teachers who take on all, or most of, the responsibility for educating students—and learning outside of school is far more available to those with substantial economic and social capital.	**Anytime, Anywhere Learning** Learning can happen anywhere and at any time for all learners with teachers, families, community members, and other important figures in a young person's life all playing important educational roles.

None of the leaps above are binary—they all represent a spectrum between the industrial paradigm on the left and a student-centered paradigm on the right. Further, a particular classroom or school community may not fully embrace all of the Ten Leaps. Some may focus on just a handful of the Ten Leaps, depending on the scope of the model. For instance, a competency-based approach to math education may place a greater emphasis on customization, rigorous learning, and active self-direction; a social studies program may focus more on relevance, connection and community, and social consciousness and action; and an initiative to embed social-emotional learning alongside academics may focus on the whole child and affirmation of self and others.

Moreover, making any one of these leaps—let alone multiple or all of them—is never easy, particularly given the strong pull of the industrial paradigm and the systemic forces that make it challenging for schools to fully embody a student-centered paradigm. Difficult as it may be, it is what must happen in order to shift from the industrial paradigm to a student-centered paradigm.

Industrial Paradigm		Student-Centered Paradigm
Purpose		**Purpose**
Sort and rank adults into factory roles		A high-quality education for all students in order to unlock their full potential to thrive and enable them to contribute to the world around them
Fixed Design Elements		**Fixed Design Elements**
Same-aged cohorts assigned to grade-level based on age		Designed to deliver the Resulting Student Experience
Uniform content for all students		
Teacher-directed learning inside physical classrooms		
Resulting Experiences		**Resulting Experiences**
Unequal expectations and opportunities		High expectations with unlimited opportunities
Narrow focus		Whole-child focus
Rote activities		Rigorous learning
Irrelevance		Relevance
Assimilation and marginalization		Affirmation of self and others
Reinforcement of the status quo		Self-consciousness and action
Isolation		Connection and community
Inflexible systems		Customization
Passive compliance		Active self-direction
Siloed schooling		Anytime, anywhere learning
Systemic Implications		**Systemic Implications**
One-third of students college and career ready		Vast majority of students achieve college and career readiness
Persistent gaps in achievement across racial, ethnic, and economic lines		Performance not predictable based on racial, ethnic, or economic identifiers
Stagnating performance on international benchmarks		Significantly improved performance on international benchmarks
Unsustainable role for teachers		Sustainable role for teachers
Limited role for parents		Integrated role for parents
Few levers for systemic reform		More levers for systemic improvement

Part Two: Getting Out of the Box

The Role of Innovative Learning Models

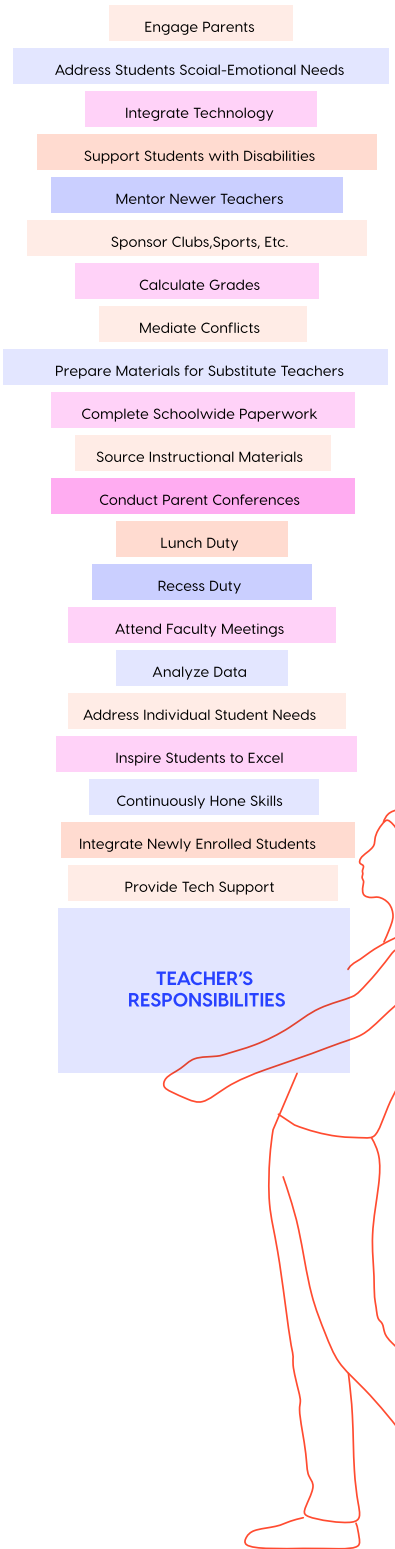
If a student-centered paradigm requires new approaches to teaching and learning so students can experience the Ten Leaps, then those experiences must be designed somewhere. The burden of that design cannot fall solely on the classroom teacher given the challenges of fulfilling their broad set of duties reflected in their current role. Just as the airline pilot does not also design the airplane, and the doctor does not discover breakthrough pharmaceuticals, classroom teachers do not generally have the time and/or expertise to alone comprehensively redesign the student experience in school—particularly if those designs are to fully leverage educational research and advanced technologies.

What is instead required are design teams that include those with teaching experience as well as others with expertise in areas such as instructional design, education research, assessment, cognitive science, child and adolescent development, classroom workflow, data, and technology. The goal of their work is to create comprehensive programs in different subjects and/or grade-spans that can be adopted by schools in order to actualize a student-centered paradigm.

We call these adoptable programs ***innovative learning models.***

The Essential Features of Innovative Learning Models

A **learning model** (which we sometimes refer to as a model) is a school-based program that bundles together an interconnected set of tools, resources, systems, and instructional practices in order to shape student learning experiences toward clear objectives. Learning models may encompass the operation of an entire school or focus on a specific subject (e.g., math) or function (e.g., schoolwide culture and practices).



A learning model typically integrates:

- an instructional design that thoughtfully incorporates components such as content, assessment, educational research, and the science of learning and development;
- an aligned set of pedagogical practices that is sustainable for teachers and leverages what they're 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

In the industrial paradigm, teachers are responsible for determining how best to integrate these elements into their classroom practice—often with the aid of discrete tools such as textbooks and digital products. While some schools and school networks have designed and implemented more explicit learning models that tightly govern teachers' pedagogical practices, workflow, and instructional materials, these models generally operate within the industrial paradigm.

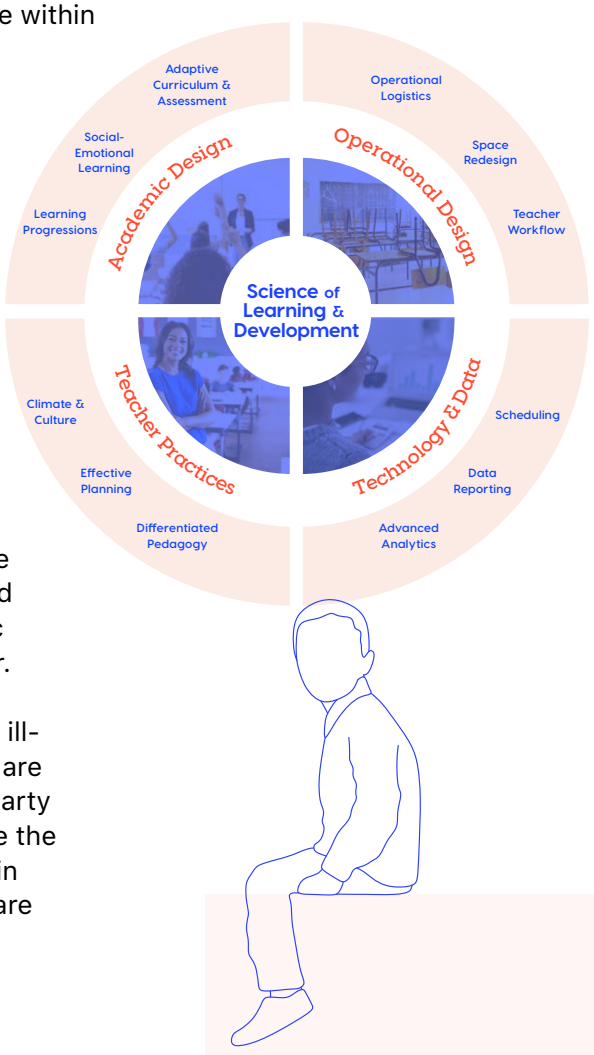
Innovative learning models are models that enable the actualization of a student-centered paradigm. They allow for schools to pursue a fundamentally different purpose and make many of the Ten Leaps in student experiences by cohesively integrating these elements in ways that can be adopted by schools that want to shift to a student-centered paradigm.

Innovative learning models are models that enable the actualization of a student-centered paradigm.

The Role of Model Providing

If innovative learning models are to support the transition away from the industrial paradigm, they will need to emerge within the context of an ecosystem designed to support their development and adoption. While sectors such as energy, healthcare, and defense have preexisting ecosystems of organizations focused on and funded for breakthrough research and development, adoption, and systemic advancement, no such equivalent exists in the K-12 education sector.

Schools and districts, the most ubiquitous K-12 actors, are generally ill-equipped to undertake this kind of research and development. They are built to operate schools, not to redesign them. Further, many third-party organizations that support schools are also built and funded to serve the existing paradigm: universities train classroom teachers to succeed in the industrial paradigm while publishers create textbooks and software products for the industrial-paradigm classroom. That is what school operators typically demand of them.



Given the lack of a preexisting ecosystem in place to support the modernization of schooling itself, the authors of this report are calling for the emergence of a new sector, **model providers**, to serve as a key component in facilitating this overdue transition.

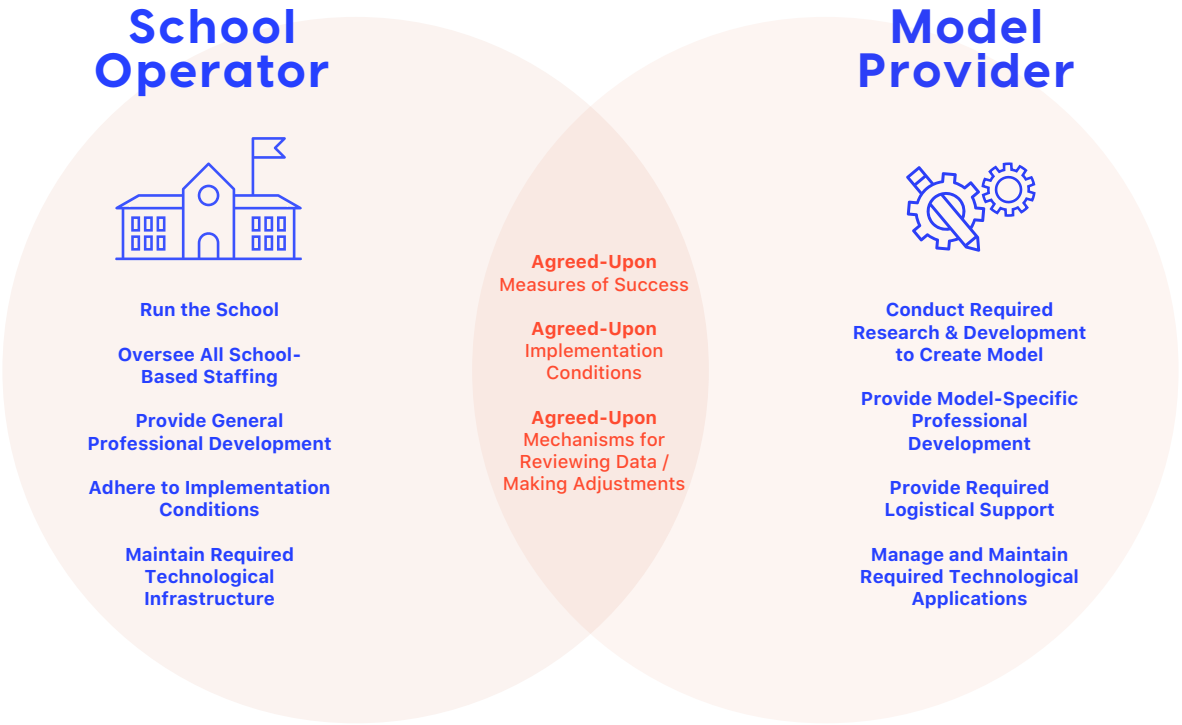
Model providers are organizations built to support these two essential ingredients required to facilitate the transition from the industrial paradigm.

First, model providers oversee the thoughtful design of innovative learning models through extensive research and development. They assemble the diverse talents of academicians, technologists, researchers, experts in child and adolescent development, creatives, and others to deeply understand what school communities want their students to experience and then design new models that reflect those aspirations in collaboration with pilot schools. The ultimate objective of these efforts is to create learning models in different subject areas and grade spans that can deliver on those aspirations and that can ultimately be implemented by schools within their existing public resources.

Second, once new models are designed, model providers are then able to support their implementation across a broader number of school communities who share in a similar vision for what students should experience. While school-based leadership is directly responsible for implementation, the model provider offers extensive, ongoing support to participating educators and shares in the accountability for student outcomes. Model providers can provide direct support to schools, or can do so through designated third-party organizations.

Innovative model providing is still very much in its infancy. Some model providers spent several years in the design phase, iterating on their models to drive impact and learning what it will take to support widespread adoption in the future. Others have models that are more mature and are operating at broader levels of scale.

Transcend collaborates with several emerging model providers such as Valor Collegiate and Van Ness Elementary within D.C. Public Schools, both of whom have existing products or programs that have the potential to evolve into



widely adopted learning models. These and many other organizations advance Ten Leaps in different ways and in different contexts, though, without the ecosystem and permission structure contemplated in this paper.

The Model Development Process

Organizations come to model providing in different ways:

- New Classrooms emerged from an initiative within the New York City Department of Education called School of One that was focused on using technology to better support personalized math instruction.
- Gradient Learning's model originated within Summit Public Schools, a network of charter schools first founded in California, where it focused on using learning science research to build a customized, mastery-based curriculum that could be shared with others.
- Valor Collegiate, a Nashville-based charter network, developed the Compass Model centered around holistic human development. In response to high demand and interest from across the country, they developed "Compass Camp," a three-year cohort-based intensive for becoming certified in Valor's model.
- EL Education was born out of a collaboration between the Harvard Graduate School of Education and Outwardbound USA. This model focuses on creating uniquely experiential, hands-on learning experiences to build mastery of knowledge and skills, character, and high-quality student work.
- Transcend's work began through its partnerships with schools to develop and share innovative models of various sizes, topic areas, and age-levels and in various ways.

There are numerous other pathways into model providing. Education publishers, researchers, school operators and support organizations, technologists, entrepreneurs, among others all bring key ingredients to the model development process that can serve as a foundation for the development of high-quality innovative learning models. It is vital that each team member deeply understands what educators and school communities want their students to experience so they can best design new learning models in ways that enable schools to fulfill those aspirations.

Model development teams benefit from a broad diversity of backgrounds and experiences as well as a balance of creative and execution capabilities. They may include educators with a deep understanding of specific pedagogical domains (e.g., elementary science and high school math); operational specialists who can focus on the logistics required for schools to

implement a model; technologists who can help to oversee the related software, hardware, and data needs; practitioners who can help to provide the requisite training and support required to bring a model's vision to life; and researchers who can provide relevant scholarship as input into model design and support the continuous understanding and improvement of the model itself. Last but not least, students and families may also have a critical role to play in model development, whether in providing insights to include in initial iterations, or in providing feedback and ideas for continuous improvement.

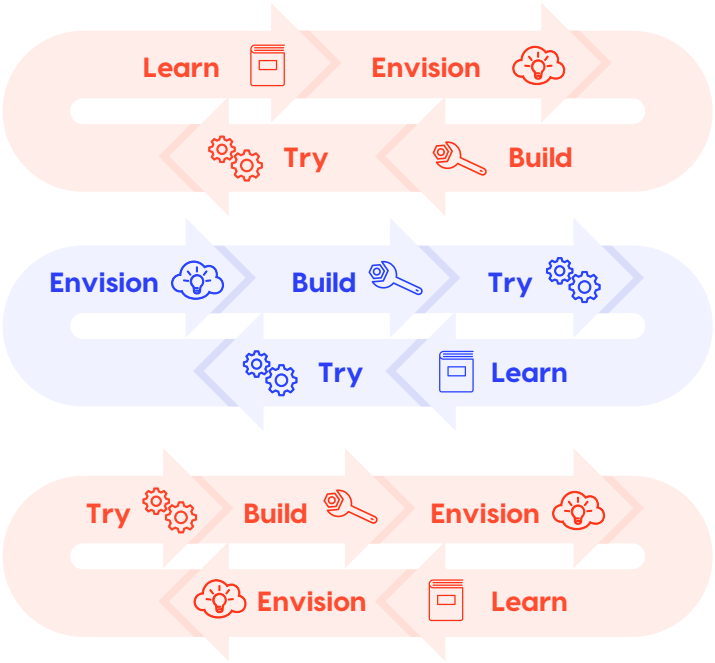
While there are few hard-and-fast rules to model development, there are some common inputs and activities that we have seen in our collective work. We describe them here in order to demystify the process and support the success of others who wish to pursue this path. The activities of model design can be represented in an iterative, ongoing cycle of design and insight creation. It is important to note that these activities can be entered by model providers at any stage and can be applied at various grain sizes, from small components of a model to the full model. We refer to it as a cycle of design and insight creation because each activity is essential to the design process, and every step also produces essential insights.

Sometimes model providers may sequentially cycle through each of the activities, while other times they may need to backtrack or repeat an activity. In lower stakes instances, designers may be able to move to trying a model (or a model component) first, learn from that experience, and then reenvision and build. In higher stakes circumstances, it may make more sense to spend more time in the envisioning and building phase before trying.

Learn

Model providers must carefully learn about—and with—their users (students, educators, and parents or caregivers), their content area, and about the relevant research. All of this informs their initial envisioning, building, and testing. As they go through the cycle and test initial prototypes of the model, they learn important insights that allow them to refine the vision and continue into the next iteration of the model development cycle. Some lessons will become clear

Sample cycles of the model development process are depicted below.



within days, while some will take far longer. Some challenges can be solved overnight, while others may require substantial redesign and multiple iterations. With each iteration, model providers grow closer to realizing their optimal vision and impact.

Importantly, a broad set of stakeholders has an essential role to play in the process of learning. Students can have extraordinary insights on how they experience various design choices and invaluable ideas for how to improve upon challenges. Teachers can provide feedback on how the various tools and resources support implementation of the model, what worked or did not work as intended, where additional clarity or training may be necessary, or how students in the classroom engaged with the new approach. Parents and families, meanwhile, can reflect on how the school and developer communicate the vision and design of the model, as well as how well the model meets the needs of their children and community.

Envision

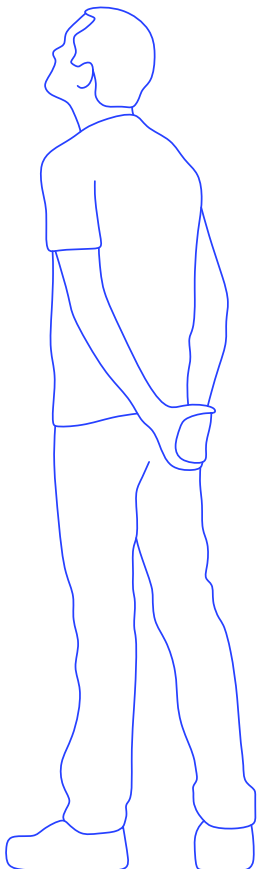
Insights that come from the learning process allow model providers to shape and refine their visions at greater and greater levels of specificity. The work of model providers typically begins with determining whether the model will focus on a particular subject or grade span. A more narrow focus may allow for deeper levels of research and development and creativity, while a broader focus may help to better facilitate the use of interdisciplinary learning and schoolwide coherence.

Once a scope is determined, the work of envisioning what students could experience in an adopting school begins to unfold. In doing so, teams may want to consider the core instructional objective(s), the design tenets that will undergird the model (see The 10 Leaps for Twenty-First-Century Learning on page 22 as examples), and what an optimal teacher and student experience would be to best support achieving that vision.

Model providers should be mindful that the constraints imposed by the industrial paradigm are not the only constraints at play. Preexisting mindsets about how schools have operated in the past can limit creative thinking about what's possible. So too can a lack of knowledge about what is technologically, financially, or operationally possible. To mitigate the risks of thinking too narrowly, model developers may seek out a set of advisors with expertise in areas that the team may be lacking. They may also look for inspiration and guidance from those in other sectors or in other states and countries. The envisioning phase can readily set the boundaries for future iteration—model developers should be sure they are thinking expansively.

Model providers should be mindful that the constraints imposed by the industrial paradigm aren't the only constraints at play.

Research should also play a key role in the development of new models, particularly as it relates to the science of learning and development. Grounding model design in existing research ensures they are built on a strong theoretical foundation and can help to surface outcome measurements that may extend beyond traditional measures of student growth and proficiency. At the same time, developers should bear in mind that most educational research conducted in school-based settings has been conducted on interventions operating within the industrial paradigm, and with industrial-paradigm measures of success. Some lessons may apply, and some may not.



Deeper Design

As a vision for a new model begins to emerge, developers will begin to explore the deeper questions to help them refine their initial vision and to begin to understand what it will take for the model to be realized. Some developers may take an inquiry-based approach to building the components of the model by examining questions such as:

- What are the practices and rituals that define the learning environment?
- What knowledge, skills, and mindsets must adults have to implement the model?

- How will students and teachers spend their time?
- How will students and teachers interact with the community?
- How will the physical space for learning be organized?
- What is the role for stakeholder communities in designing and implementing the model?
- What technological supports are necessary to support the model?
- How does the model use schools' financial resources?
- What policies may be in place that can thwart the implementation of the model?
- How will students, teachers, and families monitor success and progress?

A thoughtful exploration process can then result in a preliminary design for an innovative learning model that can actualize its broader vision.

Build

Once a preliminary design of an innovative learning model is established, model developers must then work to pull together the various tools, resources, systems, and workflows to bring the design to life. That can include:

- The creation and/or sourcing of applicable instructional resources
- Requirements for technological tools and data sources
- Specifications for any required technological development
- Job descriptions and training materials for participating educators
- Physical layouts of classroom space and requisite furniture
- Plans for determining how to spend classroom time
- Integrated tools for learning outside of school
- Mechanisms for communicating about student progress with families
- Expectations and requirements for participating school partners

In the initial phases, many model providers will choose to operate their models more manually, as teams gather more clarity about what exactly will ultimately be required. For more technologically infused visions, the use of prototype technologies and off-the-shelf tools can help to accelerate learning before a more serious technological investment is required. As the design team begins to develop solutions that partially or fully realize the model's vision, it will often work toward building a prototype model from which it can then begin to iterate.

Is This Experimentation?

Some ideas reflected in this report will raise concerns about experimentation, especially on our nation's most vulnerable student populations. Innovative learning models are not proven solutions, and the time students spend in school is both precious and highly consequential to their future.

At the same time, there are several ways to mitigate these risks. In the earliest stages of model development, adoption can take place in summer- or after-school contexts, ultimately evolving into the regular school year only after data can be gathered on the model's operational and academic impact. In addition, model providers may wish to deploy researchers into initial pilot sites so that information can be collected without delay and the models themselves can be quickly adapted based on real-time information.

It is also important to note that experimentation is common across the vast majority of classrooms, as individual teachers experiment with different lessons and different classroom approaches all the time. Indeed, this level of experimentation helps them to learn and improve their practice. These experiments take place quietly, often unbeknownst to anyone but the classroom teacher and with little data that could benefit the system more broadly.

Innovative learning models carry with them the potential for a far more responsible and transparent approach to experimentation that can also support a virtuous cycle of research and application.

New Classrooms began to build its model by generating hundreds of questions about everything from the definition of a "skill" to the role of a teacher; grouped the questions into categories; and used the groups as the basis for identifying design tenets for their model. These tenets, which included multimodal learning and collective ownership by teachers, became foundational to the components of *Teach to One 360*.

Try

Collaborating with pilot schools to implement either the full model or some of its discrete components is an essential part of the development process. Model developers may want to focus their early iterations on operationalization to answer the question: Is it possible?

In some cases, it may be also possible to simulate the implementation of a model or model component in order to learn more quickly. But at some point in the process, understanding the viability and impact of the model will require working with real students and teachers.

Early iterations may best be suited for summer- and after-school settings, where models can be refined in a lower-stakes context before adoption in the regular school year. As information is gathered and adjustments are made, implementation can shift to the regular school day. In both types of settings, designers may wish to have teams on-site to rapidly address any new challenges that emerge.

Of course, trying a new model, particularly one that challenges many of the assumptions that undergird the factory model classroom, can initially seem risky. There will almost always be a gap between the model envisioned and what happens when it is implemented in a real classroom. However, by grounding the model in research, piloting it on a small scale, and ensuring the design team can make real-time adjustments, model developers can minimize the risk while maximizing the opportunity to learn and refine the model over time and across different contexts.

Ongoing Iteration of Model Development's Design and Insight Process

The process of iteration is an essential element of model development. It allows a developer to see its design in action, observe where the model does or does not operationalize as intended, learn about how the model can expand to a broader set of pilot schools, and identify elements of the model that require reworking. For instance, in early pilots, New Classrooms realized it designed its model with a focus on personalized learning for each student, but did not fully consider how the approach inadvertently created inequities in daily teacher workload within a school. Subsequent iterations were able to correct for this shortcoming.

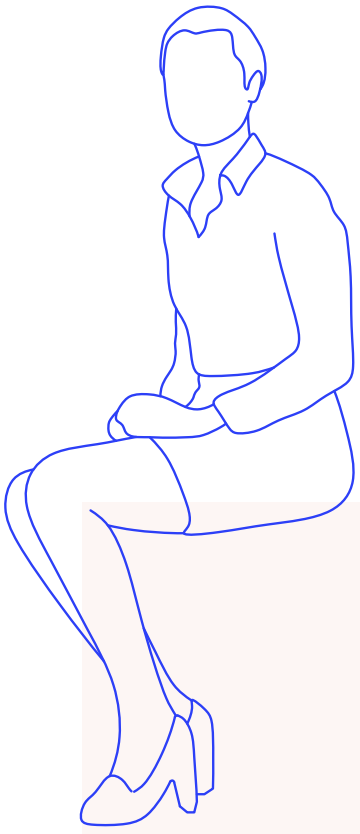
Iteration can also allow developers to pilot different features that have the potential to be highly impactful, but may need to be implemented more manually at first. For example, New Classrooms' initial approach was to manually generate personalized schedules for each student each day, based on daily assessment information. In early iterations, the process could take as many as 11 hours to complete for fewer than 100 students. But completing the process manually built a better understanding of what it would take to schedule thousands of students at scale. The organization has since built the capacity to generate thousands of student schedules each day within minutes.

Ongoing iteration in response to feedback from the field is a necessity and a unique strength among innovative model providers. Gradient has continuously iterated its training experience based on evolving best practices in professional development. It recently redesigned its educator training to allow educators to virtually attend a series of courses, keeping teachers in the classroom and empowering them to put their learnings into practice right away. Valor Collegiate simplified its Compass Model to be more user-friendly and shifted its training program from a two-year to a three-year experience, with the first year focusing exclusively on adult-implementation.

The iteration and learning process provides essential opportunities to observe and reflect on the model, including challenges of implementation and where additional work is necessary to align and ground the model in research. It can also help developers decide when the model is ready for "beta testing" at more school sites. Trying the model across multiple contexts provides additional opportunities to observe the model and its impact. Why did one element of the model seem to work better in one grade level than in others? Why did the results of the model vary at a second school site, or between schools serving different student populations? Did the model produce inequitable outcomes across student groups? Are additional tools or resources necessary to support implementation? Did implementation of the model vary between sites with different levels of stakeholder engagement?

Trying the model across multiple contexts provides additional opportunities to observe the model and its impact.

The number of beta-testing cycles required depends on the complexity of the model, the developer's ability to assess and fill gaps, and when a developer decides a model is ready to scale more broadly. There are no right answers on when a model is ready to scale, just a delicate balance between when a model is not developed enough and new schools will not have the tools or resources they need to realize the model's benefits; and when a model is too developed and overly rigid tools and resources constrain the adaptation of the model to local needs and contexts.



Often, the decision to scale a model starts out as an incremental one—from trying a model at one site, two sites, and a handful of other sites, developers can learn more and more about what works and what doesn't, and in what contexts. For example, Van Ness Elementary School in Washington, D.C., partnered with Transcend to help develop a student-centered model that prioritizes social-emotional needs alongside academic skills. After three years developing its model in house, Van Ness and Transcend first shared its approach with a small cohort of five other elementary schools in the district. It is now expanding that cohort to ten schools in D.C. as well as with schools in Tennessee and Texas.

Model development requires deep and flexible partnerships with school operators who can serve as partners during the initial development process. Teachers in partner schools can provide invaluable feedback to model providers as they work through model iterations. And the closer the design team is to seeing how their designs come to life in schools, the more effective they can be at learning key lessons and supporting continuous improvement.

The Model Adoption Process

At some point, when the model provider is ready to scale the model beyond its pilot schools, its function shifts from model development to model providing. To reach this milestone, the developer must build out a plan for partnering with additional schools to adopt the model, including codifying the model in a comprehensive set of tools, resources, systems, and instructional approaches as well as the playbooks, how-to guides, and a sequence of activities to support implementation.

Connection

To begin the process of scaling and adoption, providers and schools must connect with one another. For the provider, this may include broader communications about the existence and capabilities of the model, as well as outreach to school and system leaders in forward-leaning jurisdictions.

Either on their own or with the support of state and district leaders, schools must actively look for models and providers; they must have invested in building their knowledge and capacity to engage with a provider, including the individuals and institutions that govern the school. They must define for themselves what they are looking for and the goals they hope to achieve, and begin to explore potential models that share a common vision. They may even choose to release a Request for Information (RFI) or Request for Proposal (RFP) to further understand the model provider landscape and set up subsequent stages of exploration and adoption.

Early Exploration

Only once providers and schools have connected with each other can they begin early-stage conversations about the model, the fit, and the potential for partnership.

On the partner school's side of the equation, the process requires exploring models that are aligned to the school's needs and goals, building enthusiasm for a model provider within their own teams and governance structures, and vetting potential partners for their ability to operate successfully given local constraints. Regardless of the role community stakeholders played during the model development process, the alignment and support of educators, parents and families, and community leaders is essential for the success of the partnership. Stakeholder support can help to bolster strong implementation, open feedback loops, and build commitment to adapting the model to local contexts.

Stakeholder engagement can also sway state and district leaders whose support or opposition to the approach could significantly affect the ability of the partnership to achieve long-term success. When a school is doing something innovative, state and district leaders can support model implementation by championing the effort to colleagues, expediting waivers for policy barriers, and providing political cover in school board meetings and with the media—all of which are easier for state and district leaders to do if the school's stakeholders are also behind the effort.

Readiness

While school and district administrators are often the decision makers in the adoption process, it is the partnership between model providers and participating teachers that often determines the success of the model itself. That is why providers and participating schools will want to take the time to understand whether the model is a good fit for a particular school community.

Through our own experiences supporting the adoption of new models, we have seen how important it is to define the readiness conditions necessary for a model to thrive in a new school. Assessing the conditions for innovative

learning models is an essential part of the adoption process, and includes an assessment of the policy conditions in the state and district, the conditions of school infrastructure, as well as the conditions in the school community.

For this process to be successful, the provider must clearly articulate the outcomes and objectives the model is designed for and the school must articulate the outcomes and objectives they hope to achieve. The provider must have a clear description of how the model is operationalized, while partner schools must have a sense of how their current school design will need to change to support success. A provider must have clarity about how the model can be customized to a local context and what elements of the model are nonnegotiable; a school must have a sense of the conditions on the ground and where existing systems, structures, or policies may create challenges.

A readiness conversation can also surface any key logistical requirements and how they might be addressed. Some models may have requirements that relate to the number of students served, the available staff, physical space, and technological infrastructure. All of these requirements should be transparently communicated and thoroughly understood so both parties understand what is required for a successful implementation.

A provider must have clarity about how the model can be customized to a local context and what elements of the model are nonnegotiable.

Ensuring Successful Adoption

The successful implementation of an innovative learning model requires a close collaboration between the model provider and the partner school. Both bring a unique set of capabilities, but neither can be successful in the implementation of a student-centered paradigm without the effective and ongoing partnership of the other.

Prior to formulating this type of partnership, school communities should ask themselves where they are on—and how best to cultivate—five vital conditions, which Transcend terms the "5Cs:"[29]

Conviction: A deep and sustaining belief in the importance and potential of the work being undertaken that fuels engagement and ensures it is prioritized among school leaders and staff members.

Clarity: A comprehensive and crisp understanding of the work ahead that provides direction and a path forward.

Capacity: The support of personnel, funding, and time required to successfully design and implement a transformative school design.

Coalition: The support of committed stakeholders (e.g., school administrators, parents, students, teachers) who are helping the work become a sustained success.

Culture: Values, norms, and practices that support innovation and learning in the interest of improved opportunities for young people.

Before the provider and the school move forward with a partnership, they should get clarity on the roles and responsibilities of each entity, where (a) a school lays out its expectations for support from the provider and the outcomes the model promises to achieve and (b) the provider lays out its expectations for the conditions for implementation and school leadership and community's buy-in to the process of collaborative problem-solving.

Ultimately, with strong alignment on goals and needs, and a shared understanding of roles and responsibilities, a provider and a school can move forward with a partnership.

The Model Implementation Process

Once a model provider and a school agree to partner with one another, both parties share in the responsibility for student outcomes. Providers are not short-term contractors or a service provider—they are partners in the work. Similarly, school leaders and stakeholders are not passive recipients of an intervention—they are active contributors and collaborators.

In the early stages of preparation and implementation, the provider and a school work closely together so participating educators become well acquainted with how best to implement the model, including new terminology, new workflows, and use of new technological tools. They may also work together to redesign classroom space, adjust the school schedule, install the requisite technological infrastructure, and develop a communications plan for participating families.

As the school year progresses, both parties should expect the inevitable hiccups that emerge—a component of the model that did not work as expected, a staffing shift that was not anticipated, or a technological glitch that popped up. A strong foundation of trust built during the exploration phase provides the necessary culture of collaboration to work through these challenges. There will likely be some level of continual iteration, especially in the first few months.

Providers and partner schools should agree upon timelines for reviewing key data points and for exploring any adjustments to the model or its implementation in response to that information. They should also agree upon how and when data and key learnings are shared with key stakeholders both inside and outside the school.

Some districts will want to pilot an innovative learning model in a small number of schools in order to determine whether a broader roll-out is

Compromising for Adoption

Model providers work closely with school communities across the country who aspire to transcend the limits of the industrial paradigm and are inspired by their dedication to overcome the inertial forces it can often exert. It is in these schools where the true promise of a student-centered paradigm can take root.

At the same time, providers also work in school communities where practical considerations necessitate some level of compromise from the key tenets of their models. This can be especially true when the barriers to a student-centered paradigm become more intense (e.g., more stringent accountability for grade-level assessments) or when new leaders whose vision is more aligned with the industrial paradigm are introduced into the decision-making structure.

Observers of innovative models in action will often see evidence of a mix of industrial- and student-centered practices as a result of these compromises. While we believe innovative learning models hold great promise for enabling the widespread transition to a student-centered paradigm, we do not believe such an effort can succeed without more concerted and intentional efforts aimed at creating the space and permission structure for that to happen.

warranted. While this approach can help test the adaptability of a model in a local context, schools may want to ask district administrators and/or representatives from other schools to hold off on visiting until after participating teachers have the time to grow acclimated to this new approach.

A Shared Responsibility for Impact

If innovative learning models are designed to meaningfully shape students' experience in school, then model providers must also share in the responsibility for outcomes in the schools in which they operate.

Imposing an accountability system on third-party organizations who are not school operators would be new. Providers of discrete solutions that schools typically purchase from third-party organizations (i.e., textbooks, software products) are often not held accountable for outcomes in the schools they serve.

But in the context of a student-centered paradigm, it is both appropriate and necessary to incorporate mechanisms for accountability on model providers. The deep partnership they must forge with partner schools, combined with their comprehensive set of tools, resources, and services designed to meaningfully shape students' experiences, makes the model provider more than a vendor of instructional materials of training—they are true partners in the delivery of a mutually agreed-upon set of desired outcomes.

It is important for any evaluation of the implementation of an innovative learning model to align with the intention of the model itself. For example, applying measurements associated with the industrial paradigm (i.e., shifts in annual proficiency levels on grade-level assessments) to models oriented around a new paradigm (i.e., a model that enables competency-based learning) can create both instructional misalignment and a misreading of the impact the model may have. But if, for example, a model can enable a school to implement a competency-based approach to instruction, then accountability can be based on the learning growth demonstrated by participating students.

It is also important for model providers to articulate what is required of partner schools in order to support a successful implementation. Innovative learning models can only be as successful as the quality of implementation—clarity on schools' fidelity obligations can help to ensure that accountability mechanisms are applied fairly and that the impact of innovative learning models can be measured more accurately.

Part Three: Moving Beyond the Box

Infusing Innovative Learning Models into the K-12 Ecosystem

More must be done to leverage the full potential of model providing and its ability to support a systemic transition to a student-centered paradigm. This requires addressing the significant barriers to their development and adoption, as well as an intentional and coordinated effort to support their growth.

Understanding the Barriers to Innovative Model Providing

Despite proof points of the potential for innovative model providing, widespread adoption has been more measured. Some constraints are on the "supply" side of innovative model providing—that is, too few innovative model providers exist. Some constraints are on the "demand" side, with too few district and school leaders willing and able to adopt an innovative learning model. And some constraints are a reflection of a K-12 landscape that has continued to reinforce the industrial paradigm.

Supply Barriers

Because the K-12 ecosystem has almost exclusively focused on optimizing the industrial paradigm for more than a century, there is a profound lack of organizational capacity aimed at the development of new learning models. This includes:

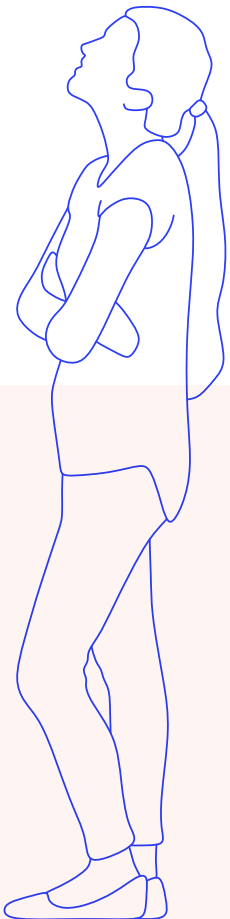
- high barriers and low entry incentives for becoming model providers
- the dearth of investment in education research and development
- the lack of capacity required to support widespread distribution and support

High barriers and low entry incentives for becoming model providers

Because the K-12 ecosystem has oriented around the industrial paradigm for more than a century, the ecosystem of providers developing innovative learning models that fall outside of this paradigm is extremely limited.

The two most prominent third-party actors, schools of education and publishers, are largely focused on meeting the labor demand and material needs of industrial-paradigm schools. While there is undoubtedly talent within those entities that could be aimed at the development of new

There is a profound lack of organizational capacity aimed at the development of new learning models.



learning models, the institutions themselves are largely focused on fulfilling the near-term demands of schools operating within the industrial paradigm.

Social entrepreneurs focused on innovative learning models must overcome several key barriers to entry, including the need to raise philanthropic capital to support research and development, outreach, and general operations. Many K-12 social entrepreneurs have gravitated to the charter sector, which has spent the last two decades building out a vast and supportive ecosystem.

Private-sector actors (whether existing companies or start-ups) also face formidable economic obstacles. The combination of a high up-front cost to develop a new learning model and the potential for a slow pace of adoption can make it difficult to rationalize investment. It is simply more economically viable to build solutions for the market as it is, as opposed to taking the risks associated with the development of breakthrough solutions.

The dearth of investment in education research and development

Reliable funding mechanisms to support the research and development are essential for transitioning away from the industrial paradigm. However, unlike in other sectors of our economy, a robust ecosystem of public and private investment focused on breakthrough innovation is practically nonexistent.

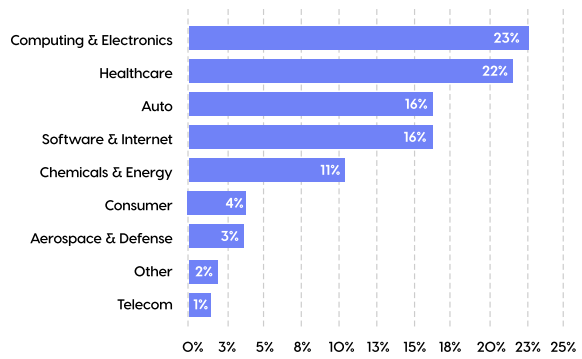
Innovation in healthcare is fueled by investments made by pharmaceutical suppliers, device manufacturers, universities, venture capitalists, among others, as well as early-stage investments supported by the National Institute of Health. The same is true in the defense sector, as the combination of governmental agencies, defense contractors, and the Defense Advanced Research Project Agenda (DARPA) conduct research and development on new forms of weaponry. The energy sector leverages billions in private capital and public investment in order to drive the transformation toward renewables.

Few such analogs exist in K-12. Private sector investment in K-12 is focused on investments that have a clear path to profitability. That generally includes a) products and services that can be readily adopted within the existing industrial paradigm and do not require much change, or b) solutions that fall fully outside the system altogether and serve families directly.[30]

Public sector investment is not much better. In 2001, the federal government authorized $264 million on education research and development—dead last among all federal agencies.[31] It was even lower in 2020 (and still dead last).[32] Since the vast majority of the research and development dollars have gone toward research (not development), only about $50 million in 2020 was actually aimed at building things schools could actually use.[33] (By comparison, Snap Inc., the makers of Snapchat, spent $1.1 billion on research and development, exploring new ways for teens to send digital photos to one another.)[34]

There was an effort to jump-start education innovation in the Obama administration through the

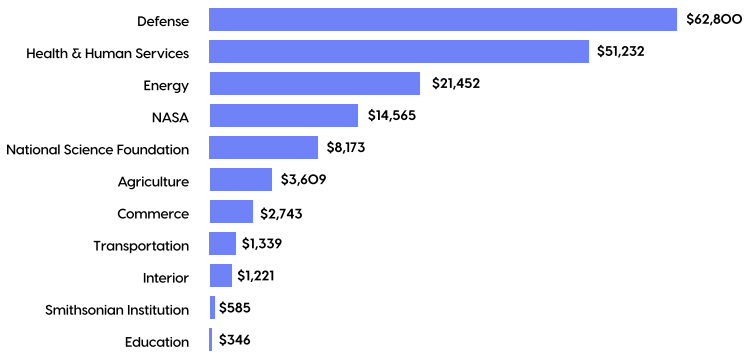
Percent of Global Research & Development Spending in 2018, by Industry



Source: Statista.com

Federal Research & Development Funding

*Budget authority, dollar amounts in millions



Source: Congressional Research Service

Investing in Innovation (i3) program, a part of the American Recovery and Reinvestment Act. The program provided $1.4 billion in funding over six years to innovative programs at various stages of development.[35] However, the vast majority of dollars went to scale programs with existing track records of success within the industrial paradigm—hardly a recipe for breakthrough ideas to emerge.[36] In the end, only 9 of 67 i3 program evaluations revealed high program fidelity and produced positive academic impact.[37] This may tell us all we need to know about the limits of what the current classroom model can deliver.

A more recent effort to support education research and development, Advanced Education Research and Development Fund (AERDF), provided a much-needed philanthropic jolt for education research and development. AERDF's goal is to convert research into capabilities—practices, methods, prototypes, tools—that can be built on to create breakthroughs. For many of these innovations, scaling their impact will nonetheless require their incorporation into new learning models that can be readily adopted within partner schools looking to embrace a student-centered paradigm.

Lack of capacity required to support widespread distribution and support

Beyond research and development, model providers face a formidable challenge in enabling the scale of new learning models once they are ready for widespread adoption.

First, the K-12 market is highly fragmented—there are nearly 14,000 school districts and 100,000 public schools in the US.[38] Achieving scalable impact requires capacity to communicate the availability and benefits of a new learning model with them, as well as the capacity to engage in direct conversations with potential partners. While some K-12 publishers have robust sales forces to support adoption of textbooks across the sector, it is rare for model providers to have anything close to these kinds of capabilities.

Second, widespread adoption will also mean instituting scalable support structures so participating teachers have the professional development required for their success. Supports can include academic coaching, operational support, leadership training, and the use of technological tools. The amount of training required will vary depending on the complexity of the model and how much change is required. But under any theory, model providers need field capacity to support successful implementations.

A Modern-Day New American Schools

New American Schools (NAS) emerged in the 1990s to support the creation and proliferation of innovative and adoptable whole-school designs.[39] NAS ultimately received over 600 proposals and funded eleven, seven of which reached the final scale-up phase.[40] NAS also provided grants to states and districts to support the early adoption of these new models.[41] By 2002, NAS-funded designs had spread to more than 4,000 schools across the country.[42]

A 2001 study of NAS by RAND found positive, though modest, impact on summative assessments, results and fidelity varied by school, by model, and by the number of implementation years.[43] Enthusiasm for the program ultimately waned, though updated versions of some models created as part of NAS are still in use today (e.g., Success for All, Expeditionary Learning).

Despite the challenges, the NAS approach demonstrated that design teams could create fully functioning, whole-school reform models based on innovative strategies that could be adopted on a large scale and that early-adopting school partners could be found. However, the overall impact of NAS was thwarted by many of the same systemic barriers that continue to block progress today.

While the overall impact of NAS was uneven, it is important to note that the models it spawned were designed prior to the emergence of the internet, cloud computing, and other technological advances that drove the modernization of most other sectors over the last twenty years. Today's model designers would have so much more to work with than those of the 1990s. Thoughtfully integrating these capabilities into learning designs, developing deep partnership with adopting communities, and addressing entrenched systemic barriers that maintain the industrial paradigm will be required for a new version of NAS to succeed.

Overcoming supply barriers

The profound barriers to the supply of innovative learning models can be overcome through comprehensive efforts aimed at lowering the barriers to entry for model providers and increasing the funding available for research and development, outreach, and support services. This will require both patient capital and a supportive ecosystem into which new model providers can be recruited.

Demand Barriers

A new and robust ecosystem to support the supply of new learning models will be insufficient to support the transition away from the industrial paradigm if it is not complemented by efforts to overcome the barriers to their demand. These include:

- systemic inertia rooted in stakeholder mindsets and power dynamics
- conditions that are insufficient to overcome systemic inertia
- school operators lack an awareness or understanding of model providing
- incongruous cost structures

Systemic inertia rooted in stakeholder mindsets and power dynamics

It is not easy for school and district leaders to fundamentally change their ways and shift to a student-centered paradigm. The change required to disrupt "business as usual" can readily be viewed by administrators and educators as either overwhelmingly laborious or inherently risky.

Many senior school administrators have themselves been successful educators within the industrial paradigm. There is simply more confidence and more comfort in returning to what is most familiar. And even when senior administrators are fully aligned, it is not unusual for others within a district or school who may not be supportive of this shift to thwart progress. While pockets of resistance may be expressed on principle, they may more likely reflect internal power dynamics.

At the same time, teachers may also be reluctant to give up the creative autonomy they have in the industrial-paradigm classroom in order to implement a learning model they did not create. Many created lesson plans they have used for years; adopting a new learning model can feel like going back to square one.

Lastly, parents may also struggle to adjust to a student-centered paradigm, especially if they expect a schooling experience for their child to be analogous with the one they once had.

Conditions that are insufficient to overcome systemic inertia

Despite these barriers, there are forceful advocates in many school communities (e.g., district leaders, board members, administrators) who champion a transition away from the industrial paradigm. They see promise in adopting a student-centered paradigm and are willing to lead the change required to bring it about. However,

these leaders often operate in conditions that are simply not ripe to overcome the forces of inertia that maintain the industrial paradigm.

For example, the diverse stakeholders who make up school communities are often pulling in different directions as they navigate competing priorities and demands. Even when they have a strong conviction that something needs to change, they are not always clear on what should replace the broken designs of today. Further, their systems often lack the human capacity and necessary culture needed to pursue and implement new models and perform the significant change management involved.

School operators lack an awareness or understanding of model providing

Most school operators lack awareness of the existence of innovative learning models, their track record, and the requirements to support implementation. Most are continuing to purchase materials aligned to the industrial paradigm because they are unaware of any viable alternatives to it.

Part of this information gap relates to supply barriers—model providers with limited capital for research and development may have even less for communications and outreach. They must nonetheless compete for the attention of district administrators whose inboxes are often flooded with marketing for products built for the industrial paradigm.

Incongruous cost structures

New learning models can reflect a combination of materials and support services that are different from how school operators typically budget.

While state and local practices vary, most school operators are accustomed to purchasing a textbook for each grade level and subject area every five or so years. Those initial adoptions are often accompanied by one-time training for participating teachers. Supplemental materials such as workbooks or software products are typically purchased annually.

The costs of new learning models can readily fall outside of these parameters. There may be no need for a grade-level textbook or for supplemental materials since both may be embedded into the model itself. However, depending on the level of change required, the need for support services and teacher development may be more extensive than one-time training costs typically associated with the adoption of new materials.

Even when they have a strong conviction that something needs to change, they are not always clear on what should replace the broken designs of today.

Overcoming demand barriers

It is unlikely innovative learning models will systematically emerge without a concerted effort aimed at stoking their demand and overcoming the forces of inertia that maintain the industrial paradigm. Transcend's work with communities across the country has uncovered five key and measurable conditions for schools and systems pursuing innovation:[44]

- clarity of vision
- conviction about the importance of student-centered learning
- capacity to implement the new model well
- culture of innovation
- coalition of multiple stakeholders, including educators and families, supporting the work

These conditions can be cultivated through an intentional, community-engaged process. The process can be accomplished in several ways, including building public will and conviction for embracing a student-centered paradigm, developing organizational capacity to operationalize the successful adoption of innovative learning models, and looking for creative solutions to address or challenge perceived barriers.

In addition to addressing these underlying conditions, demand barriers can be mitigated by structures that provide the organization regulatory and political cover for forward-leaning school communities to embrace a student-centered paradigm, and by financial incentives that can help school communities to de-risk the cost of early adoption.

Landscape Barriers

Overcoming the limits of the industrial paradigm will not only require overcoming the barriers to both their supply and demand, but it will also require a shift in the broader K-12 landscape in order for supply and demand to come together.

Systemic inertia: Policies and practices

Human inertia is often reinforced through the accumulation of dozens of regulations, processes, and systems that are all oriented around the industrial paradigm. Policies that have accumulated over decades have largely focused on optimizing the impact of the industrial paradigm. As a result, they have created substantial barriers to the adoption and proliferation of innovative learning models that challenge many of its core elements.

For example, federal and state policies that base educator accountability on the results of annual grade-level assessments can have an especially stifling effect on the adoption of innovative learning models. The policies have helped to shine a light on systemic inequities and have helped to influence adult decision-making around learning outcomes. However, the fact that state summative assessments focus on a narrow set of cognitive skills aligned to students' enrolled grade level can make it hard for schools to consider adopting new approaches oriented around a student-centered paradigm.[45]

Similar barriers can be found in state and local policies surrounding the adoption of instructional materials. Many states and districts have extensive regulations and processes centered on the procurement of textbooks and related instructional materials, many of which are organized around limiting graft and purchasing high-quality textbooks and materials.[46] Importantly, these processes are also often centered on the degree to which materials are aligned to annual grade-level standards, a fixed design element of the industrial paradigm.[47] As a result, innovative learning models that prioritize a broader set of cognitive and non-cognitive outcomes, or are designed to meet students' individual needs in service of their long-term acceleration, can often be viewed as incompatible with these policies.

Lastly, district or network practices centered on optimizing impact within the industrial paradigm can also make it harder for new models to emerge. For example, interim assessments, student grading policies, teacher observation rubrics, and other systems can all pressure innovative learning models to adopt industrial paradigm features.

Lack of a place where supply and demand can meet

Model providers who are looking to expand their impact generally do not have a place where they can find school operators looking to support a student-centered paradigm. Many of the successful partnerships forged between school operators and model providers have largely emerged by happenstance.

The lack of a robust marketplace, where the supply and demand for innovative learning models can connect, further challenges the economics of model providing, reduces investment, and constricts supply.

Overcoming these barriers will require seeding robust marketplaces where school operators and model providers can more easily find one another, contract for pilots and ongoing support, and make decisions based on transparent data about models and their efficacy.

Recommendations

The challenge of modernizing our K-12 system of schooling by transitioning from the industrial paradigm can seem daunting. Despite calls for change, the ways in which schools have operated for more than a century are deeply ingrained in the minds of educators, families, and policymakers. Seemingly every element of schooling—from facilities to bell schedules to class grades to instructional materials to teacher preparation—are all centered on the industrial paradigm and reinforced through federal and state policies.

Daunting as it may be, though, these challenges must be overcome. They are no less formidable than the paradigm shift happening in the energy sector toward the use of renewables, or the paradigm shift in the defense sector that is now centered on cyberwarfare.

Accomplishing this bold objective will require a sustained and integrated effort on the part of federal and state policymakers, philanthropists, and school operators whose collective work can enable a student-centered paradigm of schooling to ultimately emerge. Below are key recommendations for how each of these groups can address the supply, demand, and marketplace barriers that stand in the way of this essential transition.

Accomplishing this bold objective will require a sustained and integrated effort on the part of federal and state policymakers, philanthropists, and school operators.

Recommendations for Federal Policymakers

Invest in the early stages of development of innovative learning models and in the organizational capacity of model providers. (Supply)

The supply of innovative learning models can best be addressed through a concerted effort to fund their development and distribution capacity. The private sector has largely been unwilling to accept the financial risks associated with this required investment, while philanthropic funding is limited, difficult to sustain throughout a model development cycle, and generally oriented around industrial-paradigm solutions that can be scaled.

A $1.3 billion annual investment in education research and development over 10 years would support the development, scale, and evaluation of 150 impactful and scalable innovative learning models—ten model providers across each of four core domains (reading, math, science, social studies, and schoolwide), five model providers across each of two supplemental domains (health and well-being, and interdisciplinary), and across three grade spans (elementary, middle, and high). (See page 63 for more detail on how this funding could be deployed).

Fund the early adopters of innovative learning models. (Demand)

Efforts to support the supply of innovative learning models must be complemented with those to overcome the barriers to their adoption. In much the same way government-funded supply-side and demand-side incentives helped to spur the clean energy sector, the same formula is required to shift the K-12 sector toward a student-centered paradigm.

One way to do so would be to allow states to apply for federal funding to offset the cost of implementation at early-adopter schools. State entities that receive federal funding could then host a subgrant competition in which schools could access funding to support adoption-related costs of innovative learning models over a fixed period of time. Funding could also be used by state agencies to fund the administrative costs associated with overseeing, supporting, promoting, and evaluating the impact of innovative learning models.

Schools looking to embrace a student-centered paradigm will need the regulatory permission to operate under an alternate accountability structure that maintains the overall objective of college and career readiness.

Create alternative approaches to assessment and accountability that would allow for innovative learning models to emerge. (Landscape)

Federal education policies aimed at optimizing impact within the industrial paradigm have also made it more difficult for innovative learning models oriented around a student-centered paradigm to emerge. Among the most constraining policies are those embedded within the Elementary and Secondary Education Act (ESEA), which require states to institute accountability systems centered on grade-level assessments—an approach that incentivizes classroom instruction to focus their teaching on grade-level material regardless of individual student need. Schools looking to embrace a student-centered paradigm will need the regulatory permission to operate under an alternate accountability structure that maintains the overall objective of college- and career-readiness, allows for more personalized academic pathways, and provides a more precise way of measuring and rewarding learning growth toward proficiency.

Recommendations for State Policymakers

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

Some states will want to consider making investments in the research and development required to develop innovative learning models. The New

York State Education Department's investment in EngageNY, while not an innovative learning model, is a good example of how state-led research and development efforts can both impact students within a state and can scale across state lines.[48]

States have not historically invested in research and development and many may not believe they have adequate internal capacity to support a high-quality research and development process. At the same time, state-level investments in research and development can help harness the educational, technological, and creative capacities within states so the innovative learning models it oversees are more closely aligned to state standards.

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

Innovation Zones have historically been used by some states as a mechanism for providing varying levels of school or district autonomy.[49] However, the instructional innovations that have emerged have been far more limited and have generally not enabled schools to transcend the limits of the industrial paradigm. Further, decades of systems, policies, and mindsets oriented around the industrial paradigm can make it seem risky to innovate beyond its limitations. The inertia to do what's always been done can be strong and requires a permission and incentive structure to overcome.

State leaders looking to infuse deeper levels of instructional innovation into their statewide landscape may consider adopting Innovation Zones that are explicitly organized to support the adoption and proliferation of innovative learning models.

These types of Innovation Zones could involve any or all of the following:

- the identification of schools or districts who voluntarily choose to participate
- the identification of qualified providers of innovative learning models, as selected through a rigorous evaluation process
- technical assistance provided to participating school communities that can help them articulate a schoolwide vision, select the model providers most aligned to that vision, and support a successful adoption process
- policy flexibility where required to support implementation fidelity
- funding to participating schools and districts to support model adoption and ongoing evaluation of participating schools and qualified providers, including accountabilities for each

Innovation Zones have historically been more focused on government autonomy than on building the genuine capacity for innovation.

Three states—North Dakota, Nebraska, and Montana—included this form of Innovation Zones in their federally approved American Rescue Plans. See page 57 for a description of how Innovation Zones generally work.

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

State leaders looking to facilitate the transition to a student-centered paradigm can help to educate local leaders about the value of innovative learning models. While model providers themselves must also play a key role in reaching out and communicating with potential partner schools, the highly fragmented nature of the K-12 sector (nearly 14,000 school districts) requires states play a key role in amplifying what is now possible and supporting school operators in the exploration and adoption process.

Some ways states can support the development of a robust landscape for model providing include:

- publicly speaking and writing about the need to transition to a student-centered paradigm
- ensuring key administrators are dedicated to fostering the supply and demand of innovative learning models within the state
- integrating innovative learning models into broader statewide efforts in areas such as school improvement, Career and Technical Education, and supports for English learners and students with disabilities
- holding events where model providers and school operators can come together
- promoting the Models Exchange in the context of aggregating curricular and open educational resources for schools
- conducting RFPs and negotiating master services agreements with model providers that can then be leveraged by local education agencies
- providing technical assistance to local education agencies looking to adopt and implement innovative learning models

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

States' K-12 regulatory landscapes are largely oriented around the implementation and optimization of the industrial paradigm. They can include rules on topics such as class size, graduation requirements, teacher certification, textbook procurement, budget structures, course requirements, assessment, and accountability.

While some of these regulations may not impede the adoption of innovative learning models, others may be more problematic. For example, states that require or promote the adoption of classroom-based curricular materials aligned to annual grade-level standards can readily be at odds with models that provide students with personalized academic pathways to proficiency. Similarly, graduation requirements that mandate students successfully complete yearlong courses can prevent students from accessing models that allow them to focus on key concepts they missed, as opposed to having to retake a full, yearlong class.

While many schools will likely want to continue operating within the industrial paradigm, state leaders must carefully examine their regulatory landscape so school communities looking to transition to a student-centered paradigm have the permission and opportunity to do so.

Develop and pilot competency-based assessment and accountability. (Demand)

For some subjects and grade spans, adopting a competency-based assessment system and accountability system is a vital step to transitioning to a student-centered paradigm. Done well, competency-based assessment and accountability can align the instructional incentives embedded within statewide assessment and accountability systems to a student-centered paradigm. They can also provide parents, students, and teachers with more precise and transparent information on the progress each student makes toward proficiency than current state assessments afford.

Initially, states would likely need to operate a competency-based assessment system as a supplement to current, state-summative assessments given the requirements of federal law. However, as federal policy evolves, states may one day be able to give schools a choice about whether to implement a grade-level-based or competency-based assessment and accountability system. As competency-based assessments evolve, model providers may ultimately be able to validly and reliably embed them directly into the models themselves, eliminating the need for end-of-year tests all together.

Recommendations for School Operators

Consider launching a model design team. (Supply)

Some school operators—or members of their teams—may also consider leading or participating in the design of an innovative learning model. Many have deep levels of expertise and creativity that can form the basis for designs that support many of the Ten Leaps.

School operators looking to lead the development of innovative learning models should consider how their internal expertise can best be complemented with those outside of their organizations, how to protect design teams from operating in day-to-day challenges schools currently face for an extended period of time, and how their models can ultimately scale to serve students outside of their community.

School operators looking to support the design of innovative learning models, but not necessarily lead the process of doing so, may actively look to partner with early-stage model providers to support their initial iterations.

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

School operators who believe in the necessity of shifting away from the industrial paradigm can begin by undertaking a community-engaged process of building a broad-based coalition of key stakeholders—community leaders, administrators, teachers, families, and students—who can unite around a common vision for schooling that is oriented around a student-centered paradigm. Districts such as the Cleveland Municipal School District used the disruption caused by the pandemic as a moment to reset their approach to education by engaging with their community around a bold new vision for its schools that is far more oriented around a student-centered paradigm.[50]

Align internal structures, policies, and stakeholders to support model adoption. (Demand)

Many internal systems and structures within school districts reinforce the industrial paradigm of schooling. So too can the experiences and biases of school board members and administrators, whose successes operating within the industrial paradigm served as a catalyst for their future career opportunities.

That is why school operators looking to embrace innovative learning models must carefully examine their internal operations so both participating schools and model providers are set up for success. That can include setting up new internal reporting mechanisms, reviewing policies and practices that may conflict with a student-centered paradigm, and communicating clearly with key internal stakeholders on their role in supporting the success of this transition.

Explore adopting innovative learning models as a primary or supplemental curricular offering. (Demand)

Districts and schools looking to transition to a student-centered paradigm can explore partnering with the current community of model providers to implement innovative learning models. A brief description of providers, some of the leaps they support, and their contact information can be found on Transcend's Innovative Models Exchange at exchange.transcendeducation.org. A template for shaping an RFP focused on innovative learning models can be found on page 58.

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

School operators focused on transitioning to a student-centered paradigm for learning may find they are blocked by a set of state policies, rules, and regulations rooted in the industrial paradigm. Oftentimes, state officials may not even realize how constraining some of these regulatory approaches can be. It is incumbent upon school operators to help educate state policymakers on why changes to the regulatory landscape are essential for modernization.

Recommendations for Philanthropy

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

Philanthropy provides the most viable pathway for funding the design of innovative learning models. Market forces are ill-equipped to address this gap in the near term, and public investment in education research and development is limited and focused largely on industrial-paradigm studies and solutions.

K-12 philanthropists interested in supporting a systemic transition to a student-centered paradigm can consider investing in:

- exploratory efforts by new or existing K-12 organizations aimed at becoming a model provider
- early-, middle, or later-stage research and development efforts on the part of model providers
- communications and outreach capacity of model providers so they can grow their impact with new school partnerships
- innovators who have historically been undercapitalized and who have proximity to the communities that their models are built to support.

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

Philanthropy can provide the much needed "risk capital" for schools to undertake community-based design journeys and consider piloting an innovative learning model. Investments aimed at the demand side of the model provider sector may focus on technical assistance to states, districts, and schools looking to evolve into a student-centered paradigm, as well as support for individual schools and districts looking to adopt innovative learning models.

Invest in the ecosystem for model providing, including advocacy for enabling federal and state policies. (Landscape)

In order for a vibrant ecosystem of model providing to take root, a broad-based supporting ecosystem must begin to emerge. This would include organizations that:

- advocate for federal and state policies that eliminate barriers to model providing and catalyze their growth
- recruit organizations to become model providers
- support model providers in their development and iteration of innovative learning models
- provide technical assistance for states, districts, and individual schools looking to adopt innovative learning models
- communicate with key stakeholders, including policymakers, philanthropists, education leaders, teachers, parents, and sector influencers about the model provider sector
- evaluate the impact of innovative learning models at various stages of development
- sector-building efforts where model providers can learn from one another

Recommendations for Education Advocates

Champion policies that promote the development of innovative learning models. (Supply)

Transitioning to a student-centered paradigm will require a coalition of education advocates who recognize the promise of innovative learning models and the need to invest and promote their success. While the work of many existing K-12 advocates may be focused on a specific issue or cause (e.g., special education, workforce development, gifted and talented education), it may well be that innovative learning models provide a new, viable pathway to achieving organizational objectives.

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

State and local education advocates can help to inform school operators about the existence of innovative learning models and opportunity to transition to a student-centered paradigm. In some cases, advocates may also be able to provide additional capacity for school operators to help them to both shape a schoolwide vision oriented around a student-centered paradigm and explore model providers for whose models might align to that vision.

Advocate for policies that shift the federal, state, and local landscape in support of innovative learning models. (Landscape)

K-12 education will be unable to effectuate a transition from the industrial paradigm to a student-centered paradigm without a coalition of advocates who can help to champion the required shifts in policy. Some of these shifts, including those related to federal assessment and accountability policy, create complex tensions that must be resolved. Others such as federal investment in research and development or the creation of state-based Innovation Zones may be more ripe in the near term for a coalition of advocates to find common ground.

Recommendations for K-12 Solution Providers

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

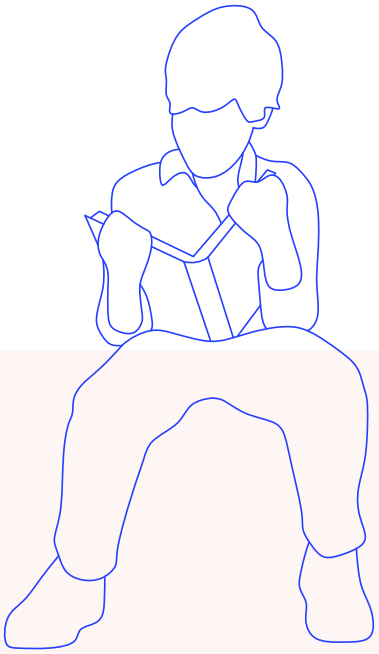
The marketplace for today's K-12 solutions includes tools and materials designed to operate within the industrial paradigm. However, many of these solutions can likely be converted into innovative learning models with new investments in both product development and school support. This is especially true for technology-based solutions that have the capability of meeting students' unique needs but are generally used to support whole-class instruction.

As school operators begin exploring the adoption of innovative learning models, existing K-12 providers may wish to explore what adjustments may be required so they are competitive.

Consider launching new organizations focused on model providing. (Supply)

Education-minded entrepreneurs may want to launch new entities focused on developing innovative learning models from their inception. New entities have the benefit of designing new learning models in ways that are less constrained by the legacies of existing solutions and organizational norms. Universities, charter management organizations, and other related K-12 entities may also wish to leverage their experience and expertise in order to launch new entities focused on innovative learning model development.

The marketplace for today's K-12 solutions includes tools and materials designed to operate within the industrial paradigm. However, many of these solutions can likely be converted into innovative learning models.



Barriers & Recommendations

Supply

Barriers

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

Recommendations

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

Barriers

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

Recommendations

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

Barriers

Systemic inertia rooted in policies and practices

Lack of a place where supply and demand can meet

Recommendations

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.

Conclusion

The industrial paradigm of schooling is inherently incapable of providing each student with the kind of education they need to thrive in the twenty-first century and contribute to the world around them. For decades, its fixed design elements—age-graded, whole-class, teacher-directed instruction—muted the impact of well-intentioned improvement efforts and resulted in a student experience that leaves the vast majority of US students unprepared to succeed in the world.

It is time to break free from this box and replace it with a student-centered paradigm that better addresses our nation's systemic needs, and is more reflective of its true capabilities. We believe the evolution of innovative learning models and the model provider sector provides the most viable approach to achieving that objective because it allows for the student experience to no longer be constrained by what an individual classroom teacher can plan and execute for a group of same-aged students.

It is hard to see how our system of schooling will modernize without the emergence of a new sector dedicated to that explicit purpose. The work of nearly all of the actors operating in the K-12 space—from school operators to publishers to universities to third-party support organizations—is oriented around optimizing within the industrial paradigm. Decades of laws, regulations, and systemic processes have further ossified the industrial paradigm and made it hard to consider better ways of providing a high-quality education to our nation's fifty million students.

Innovative learning models provide a pathway to true systemic modernization. Untethered from the legacies of the industrial era, innovative learning models can be thoughtfully designed in ways that leverage research, know-how, and modern technologies in order to provide students with a learning experience that is more reflective of the Ten Leaps.

A movement centered on the adoption of innovative learning models can also be more politically sustainable than school reform efforts that have characterized the last two decades, especially if their designs are grounded in addressing the explicit needs of families, teachers, and students. While the inertia to maintain the industrial paradigm is strong, it is hard to identify specific political constituencies that would actively fight against modernization, especially in light of the pandemic and profound labor shortages. The fact that innovative learning models can be adopted in urban, suburban, and rural contexts further strengthens both their political viability as well as the potential for widespread impact.

It is time to break free from this box and replace it with a student-centered paradigm that better addresses our nation's systemic needs, and is more reflective of its true capabilities.

Some critics of this approach will argue that in many schools, teachers lack the capacity to effectively implement an innovative learning model. These new approaches to schooling still very much require the talents, skills, and knowledge of educators to succeed. They are not "teacher-proof." However, thoughtfully designed models can be designed in ways that make the job of the teacher more sustainable, particularly in cases where technology can play a role in filling some of their current functions (e.g., grading, parent communications, data analysis, and planning). Moreover, simply waiting for the moment when teachers have the capacity to succeed within a student-centered paradigm will mean a perpetual commitment to the industrial paradigm, especially in schools where teacher turnover is particularly high.

Others will argue that the introduction of new learning models oriented around a different operating paradigm can undermine mechanisms established over the last two decades to instill school and teacher accountability. We disagree. The objective of a student-centered paradigm is for far more students to graduate high school ready for college or a career by providing multiple pathways for them to get there. Innovative learning models can be designed in ways that provide greater transparency and precision to this process, while also introducing a new actor—the providers themselves—who will share in the accountability for student outcomes. Their emergence does not require a wholesale gutting of the current assessment and accountability system, but does require the explicit space for new models to properly emerge.

There are undoubtedly risks associated with pursuing the model provider approach. The capacity for creating new learning models may be too limited, the appetite among school communities for adopting new models may be too restricted, the policies and mindsets that have cemented the industrial paradigm may be too strong to dislodge, or those providing the funding required to get to scalable impact may be too impatient. There are surely others.

But those risks must be examined against the risks of continuing to focus only on optimizing for impact within the industrial paradigm—an approach that, after more than a century, leaves nearly two-thirds of our nation's youth unprepared for college or a career, places educators in a fundamentally unsustainable role, and does little to address our nation's inequities.

We hope this report serves as a helpful blueprint for one way to move forward.

Who We Are

NEW CLASSROOMS

New Classrooms Innovation Partners developed *Teach to One 360*, an innovative learning model for middle and high school mathematics that allows students to progress along a customized educational pathway by integrating teacher-led, collaborative, and independent learning modalities. It also developed *Teach to One Roadmaps*, an all-digital tool that includes a precise diagnostic assessment, aggregated content from multiple providers, and personalized learning progressions.

Transcend
BUILDING BEYOND THE LIMITS OF SCHOOL DESIGN

Transcend is a national nonprofit that supports school communities to create and spread extraordinary, equitable learning environments. The organization was founded on a belief that we must reimagine schooling, using a community-driven approach, so all children can realize their infinite potential. Transcend pursues its mission by partnering directly with schools on design journeys while also sharing powerful models, tools and insights across the sector, with the goal of fueling significant leaps in education so all young people can thrive in and transform the world.

Innovation Zones for New Learning Models

A Way for States to Catalyze Innovation for Twenty-First-Century Learning

While Innovation Zones have historically oriented around regulatory relief, governance, or site-based autonomy, states such as North Dakota and Montana are leveraging their ESSER/ARP dollars to develop new kinds of Innovation Zones designed to bring the capacity required for shifting to a student-centered paradigm, beginning in fall 2023.

Their approach is based on the following structure:

1. States invite school operators (local education agencies and/or schools) to apply to be part of the state's Innovation Zone.
2. In parallel, states invite model providers to apply to work in the Innovation Zone and design an evaluation and selection process to determine qualified providers.
3. States provide technical assistance to participating schools in order to support the development of a schoolwide (or subject-specific) vision, the selection of model providers, and the long-term success of the partnership.
4. Participating schools, approved technical assistance providers, and approved model providers then mutually determine whether the model can be successfully implemented in the school.
5. Participating schools and a model provider contract with one another to support implementation, with explicit roles and responsibilities articulated for both parties.
6. Each year, the model provider and partner school submit interim data to the state regarding the overall implementation and relevant student performance data.
7. At the end of a fixed period of time (generally three to five years), model providers reapply to maintain their status as an approved model provider.

These types of Innovation Zones can be set up either by state legislation or by the administrative action of a state education agency. In doing so, state policymakers consider:

- Whether the Innovation Zone will focus on individual subjects and/or grade spans (e.g., Math Innovation Zones for middle grades) or multiple subjects and grade-spans
- The criteria for determining which schools and/or local education agencies will be permitted to participate
- How the state will modify, supplement, or waive applicable state policies and regulations for participating schools
- Whether participating schools will be able to access funding to support the adoption of state-approved learning models

Both states included Innovation Zones as a core focus of their ESSER/ARP commitments. Each plan calls for the use of new learning models, comprehensive measures of learning growth, and shared accountability for results. In both states, state agencies are building operational capacity at the state level to support implementation, engaging with key stakeholders across the state to garner support, and developing ongoing feedback loops. They are also coordinating with each other to support their initial endeavors and learn from one another.

Districts may also want to consider a more localized version of Innovation Zones for individual schools. In doing so, however, they may need to consider how best to build local capacity to support this transition, as well as how to mitigate the impact of any state or local policies that could impede successful implementations.

A Sample Guide to Developing RFPs for Innovative Learning Models: Mathematics

Innovative learning models provide an alternative way of thinking about how best to address current educational inequities and inadequacies. They stem from a core belief that the structures of school originated more than 100 years ago, with all same-aged students learning the same material at the same time. This structure makes it difficult for teachers to tailor learning to each student's unique strengths and needs.

Innovative models challenge these structures by providing schools with an integrated set of tools, systems, teacher supports designed to enable academic acceleration and social-emotional development. This form of instruction can be especially relevant for schools and districts looking for innovative ways to address learning loss as a result of COVID-19.

Innovative learning models differ from digital and non-digital curriculum products in that they can generally include multiple products (e.g., content, assessment, scheduling, reporting, and gradebooks) as well as extensive professional development and teacher support. Because many districts are unfamiliar with procuring innovative learning models, below are ten key considerations to take into account when crafting an RFP for a mathematics innovative learning model, along with sample questions to incorporate.

1. Model Components

Understanding what **is** and **is not** included in different innovative learning models can help districts to understand the various capabilities of each provider and to compare the value propositions embedded within each proposal.

Proposed Prompt for RFP

Please check the following components included in your innovative learning model:

- ☐ **Instructional Content**
  - ☐ Modalities
    - ☐ Independent
    - ☐ Teacher-Led
    - ☐ Digital
    - ☐ Collaborative
    - ☐ Project-Based
  - ☐ Scope
    - ☐ Students can only access grade-level material
    - ☐ Students can access content from multiple grade levels

- ☐ **Instructional Assessments**
  - ☐ Diagnostic
  - ☐ Cumulative
  - ☐ Personalized
- ☐ **Academic reporting**
  - ☐ Administrative
  - ☐ Teacher
  - ☐ Parent
  - ☐ Student
- ☐ **Degree of Personalization**
  - ☐ Personalized academic targets based on student starting points
  - ☐ Personalized learning progressions
  - ☐ Ongoing program adaptivity to individual student needs
- ☐ **Student grouping and regrouping**
  - ☐ Frequency
    - ☐ Daily
    - ☐ Weekly
    - ☐ Monthly
    - ☐ Other
  - ☐ Level of automation
    - ☐ Tools for teachers to implement
    - ☐ Fully automated
- ☐ **Out of school acceleration**
  - ☐ Ability for students to accelerate outside of school hours
- ☐ **School Supports**
  - ☐ Program Onboarding
    - ☐ District training
    - ☐ School Leadership training
    - ☐ Upfront logistical support
    - ☐ Upfront professional development
  - ☐ Ongoing Logistical Support
  - ☐ Ongoing Professional Development
- ☐ **Social-Emotional Supports**
- ☐ **Other Key Features**
  - ☐ *If you have one or more videos that explain how your model works, please include a link.*

2. Grade-Level Focus

Some schools may choose only to look for providers in specific grade spans, while others will look for wider levels of coverage.

Proposed Questions for RFP

- *What grade spans does the model apply to?*
- *In what ways does the program differ for different age groups?*

3. Operational Requirements

Different models may have different requirements for staffing, scheduling/instructional minutes, learning space, student cohort sizes, and technology. Understanding these requirements can help to determine if the implementation is viable.

Proposed Questions for RFP

- *What are the requirements for staffing, scheduling/instructional minutes, classroom space, student cohort sizes, technology, and any other area relating to school operations?*
- *Can the model be configured to support different operational realities?*

4. School Supports

Because innovative learning models challenge many of the key attributes of traditional classroom instruction, teachers will need logistical support and professional development, especially in the early stage of implementation. A well-crafted plan for teacher supports can accelerate the change management process and position a school to more readily achieve high levels of impact.

Proposed Questions for RFP

- *How does the model provider offer logistical support and professional development to teachers and administrators?*
- *Is this included in the fee?*
- *Do these costs vary over time?*

5. Assessment

Enabling a personalized approach to learning requires tools that can accurately assess where students are starting from, measure progress in real time, and provide reliable ways of measuring growth at key intervals.

Proposed Questions for RFP

- *How is each student's starting point initially diagnosed?*
- *How is their learning tracked over time?*
- *What mechanisms are in place to reliably measure whether students are growing throughout the school year?*

6. Learning Modalities

The use of multiple modalities is a key enabler of more personalized academic learning progressions since an individual teacher cannot provide instruction on multiple skills at the same time. In addition, multiple learning modalities that are effectively synchronized allows for a student to learn about the same concept in different ways, thus deepening their conceptual understanding. The use of multiple modalities can also better ensure that students are learning in ways that work best for them—some may excel with teacher-led instruction, others with more independent modalities, and still others with more collaborative experiences.

Proposed Questions for RFP

- *What learning modalities are standard in the model?*
- *To what degree do these learning modalities work in synchronicity?*

7. Degree of Personalization

Schools look to innovative learning models so that students are able to progress on their own individualized path to proficiency. The degree to which an innovative learning model can:

1) Help schools to determine the precise path each student should take
2) Provide a rich and viable way of operationalizing that path for each student is essential to accomplishing this vision

It is important for districts and schools to understand the precise ways in which different models personalize what, when, where, and how students learn.

Proposed Questions for RFP

- How does the model personalize what, when, where, and how students learn?
- How does data regarding students' historical learning patterns influence their future learning experiences?

8. Social-Emotional Development

Learning is inherently a social and emotional process. Innovative learning models that also integrate components designed to support students' social and emotional development can enable schools to better serve the whole child.

Proposed Question for RFP

- How does the model integrate social and emotional development into the overall design?

9. Use of Time

Some districts and schools may look to pilot an innovative learning model as a replacement to their core instructional program, while others may wish to implement in ways that supplement a core curriculum implementation by implementing a model in lieu of an elective, for example.

In addition, given the inherent limitations of instructional time within the school year, some innovative learning models may be able to effectively leverage out-of-school time in order to provide new opportunities for students to accelerate.

Proposed Questions for RFP

- *Can the offering be implemented in core and supplemental contexts?*
- *What are the differences in terms of how the program is implemented and in the associated operating requirements?*
- *How does the model leverage out-of-school time to support acceleration?*

10. Research and Impact

Innovative learning models are still very much in their infancy, but some providers may have research on overall effectiveness.

Proposed Questions for RFP

- *What research has your organization done into the effectiveness of the model?*
- *What are the key conditions that drive overall program impact and effectiveness?*

Summary

Innovative learning models provide a unique opportunity to reimagine the classroom experience so that teaching can be tailored to the unique strengths and needs of each student. Understanding the various strengths and limitations of model providers can help to ensure a thoughtful decision-making process and successful implementation.

A Financial Model to Scale the New Sector

10-Year Goal: 150 Innovative Learning Models Serving 25M Students Across 72K Schools

Funding the Supply of Innovative Learning Models ($6.3B / 10 years)

- **10 Models in Each of 4 Core Domains / Grade Spans**
- **5 Models in Each of 2 Supplemental Domains / Grade Spans**

	Elementary	Middle	High	TOTAL
Reading	10	10	10	**30**
Math	10	10	10	**30**
Science	10	10	10	**30**
Social Studies	10	10	10	**30**
Health & Well-Being	5	5	5	**15**
Interdisciplinary	5	5	5	**15**
TOTAL	**50**	**50**	**50**	**150**

Phases of Three-Year Research & Development Grants

Phase 1: Incubation
Avg Annual Grant: $4M
Avg Number of Schools Served by Year 3: 5

Phase 2: Iteration
Avg Annual Grant: $5M
Avg Number of Schools Served by Year 3: 40

Phase 3: Scalability
Avg Annual Grant: $4M
Avg Number of Schools Served by Year 3: 500
Total Funded Models: 211 (~30% of which will not succeed)

Funding the Early Demand for Innovative Learning Models ($6.9B / 10 Years)

- One-time planning grants for adopting schools: $30k (of which 75% will use)
- Five-year grants averaging $25K annually grant to support model adoption
- Modest levels of annual attrition

10-Year Total

Supply	$6.3B
Demand	$6.9B
Total	$13.2B
Annual Avg	$1.3B

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