Building the Future of Learning

Funding Opportunities for a **New Paradigm**

LearnerStudio

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Acknowledgements

About the Authors

Kim Smith has 30 years of experience across the nonprofit, philanthropic and private sectors building and growing high-impact enterprises. Kim is the founder and CEO of the newly launchedLearnerStudio. Kim's career has included founding roles at Teach for America (TFA), New Schools Venture Fund, Bellwether Education Partners, and the Pahara Institute. Kim serves on a range of boards, including the Pahara Institute, New Schools Venture Fund, City Year, Lone Rock Retreat, and The Institute for Citizens and Scholars. She focuses on rallying the people, ideas and resources necessary for transformational systems change. Her focus includes identifying and supporting entrepreneurial change agents, cultivating networks of leaders, and leadership development in PK-16 education, all with an emphasis on innovation, leading across difference, "third way" solutions, adult learning communities, and diversity, equity and inclusion.

Jen Holleran advises philanthropists, helping them identify and develop paths to more meaningful giving, and connecting them to proximate leaders at the forefront of educational innovations. She is along time education and nonprofit leader focused on educational equity, economic mobility and student-centered, deeper learning. Jen has worked side by side with some of the country's largest donors, helping to deploy hundreds of millions of dollars, including launching and leading Mark Zuckerberg's and Priscilla Chan's philanthropy through Startup: Education (an education precursor to the Chan Zuckerberg Initiative) and working with some of New England's largest donors. Jen draws on her decades of experience in education as a high school teacher and principal, a leader of small schools work in Oakland Unified School District and founder of the Bay Area New Leaders for NewSchools. Jen is the founder and principal of Holler an Impact Advisors.

LearnerStudio is a nonprofit intermediary accelerating progress towards a flexible, rigorous, equitable, and learner-centered education system, to ensure all our young people are inspired and prepared to thrive in life, career, problem-solving, and citizenship.

Why This is an Important Moment For Philanthropy

The past few years have brought seismic shifts across our society: the disruption of a global pandemic, a long-overdue racial reckoning, technological advances moving at warp speed, and the increased polarization of our society. Yet for all the conflict and upheaval we have endured - these shifts also create unprecedented opportunities to do things differently, to make long-needed changes that could fundamentally improve the world in which we all live.

> We hope to provide philanthropists an introductory roadmap - highlighting inspiring new ideas, sharing hope-filled observations, and building upon the reinvention work already underway in the US.

One of the places most in need of change - and which holds potential for incredible reward - is public education. As two professionals who have spent decades guiding and supporting philanthropy in education, we began to consider the ways our current approach to education might have a role in causing, mitigating, preventing, or amplifying these changes. We wanted to know what shifts in education were underway and where, and what changes are still needed. To get at these questions, we engaged in conversations with over 200 dynamic education innovators about their work trying to ensure that the education our children receive prepares them for our increasingly complex world. We convened 80 national and local education innovators in person to have more in depth conversations and to collaboratively explore an inclusive vision for what reinventing education might look like.[1]

What we offer here is a synthesis grounded in learnings from innovators in the field. We hope to provide philanthropists an introductory roadmap - highlighting inspiring new ideas, sharing hope-filled observations, and building upon the reinvention work already underway in the US. We share insights about a paradigm for public education that defines success as thriving in life, careers and democracy, not merely proficiency in school. This new paradigm will require a community of funders who support the creation of a coherent vision and make concerted investments to re-engineer the architecture of public education from "schooling" towards a deeper focus on "learning."

To support progress towards a coherent vision, we lay out a set of principles and describe a set of interconnected levers that are essential to building the new paradigm. We then identify examples of innovators who are pulling these levers in ways to enhance, propel and unleash a new public education paradigm. We have summarized our learning and organized it to provide multiple entry points toward this new paradigm for philanthropic funders - both new to education, and experienced - highlighting ways they can support the educators, parents, students, entrepreneurs, policymakers and others who are crossing traditional boundaries to reinvent education. This is a critical moment for philanthropy to support the emergent education paradigm that our students, families, democracy and economy need. As Paul Ylvisaker at the Ford Foundation once noted, **"Philanthropy, at its best, is society's passing gear."**

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[1] See Appendix 1 for a list of conversants.

The Changes and Opportunities We Face

Both new and long-time funders of education know that within the broader context of global and societal changes, the role of public education is particularly important. It is a fulcrum: in our schools, we prepare our youth to overcome the challenges we face. At the same time, our schools must navigate within the changing nature of the world around them. Therefore, it is worth noting several key shifts that have taken place in recent years that are impacting schools and schooling.

The purpose of education held by families and students has elementally shifted. Initially designed during the Industrial Age by nation-states to create a stratified "community" and to sort learners and then prepare some for the workforce and others for economic and civic leadership, we now expect schools to provide **all** children with equitable opportunities to thrive as individuals and to be prepared for success in fulfilling and family-sustaining careers that require continuous learning and upskilling.

> Students want to fix the passivity and boredom of school, and to have more agency in determining what and how they learn so that their individual needs are met.

Parents increasingly are attuned to mental health needs and life skills - now explicitly want schools to be places that provide for and foster the development of strong, supportive and sustained relationships with caring adults who can help students grow and thrive, and develop healthy relationships with peers.[2] Having seen first hand the limitations of virtual/Zoom classes with students passively sitting to receive facts for rigidly defined periods of time, they want schools to be more engaging, and sources of inspiration within which their children can learn skills **while** discovering and honing passions, and producing their own knowledge. Tensions related to aligning values between home and school are fueling parent opt-out movements and accelerating declining enrollment in public schools.[3] **Students** want to fix the passivity and boredom of school, and to have more agency in determining what and how they learn so that their individual needs are met. Like their parents, they want a safe, nurturing and supportive place to be with friends while they discover and follow their own interests, passions and talents. Grown used to personalization in every other aspect of their lives, they want help determining a personalized pathway during and after high school that prepares them for modern work and to lead a fulfilling life. **Put simply, they seek the opportunity to thrive in life in terms that they define.**

[2] Tyton Partners (2021) School Disrupted
[3] Urban Institute (2023) Where the Kids Went

At the same time, a confluence of other school-related factors are spurring the need for changes in what is funded, and where, and to whom we direct funding. **Equity matters more than ever.** Our public schools were originally designed to sort for opportunity, and while decades of reform helped togain clarity on our equity challenges, we have not yet managed to solve them. **There is a generational shift underway.** Today's students - who have grown up with ubiquitous screens, smartphones, WiFi, YouTube - receive and process information differently than past generations. Yet, the schools most of them attend look remarkably similar to those their grandparents attended. **Technological advances are changing the what, how, where and when of learning.** Advances in connectivity, AI, virtual reality (VR), gamified learning, augmented reality, the metaverse and blockchain are shifting the ways students attain and apply knowledge, making it more accessible to students anytime, anywhere, and creating an opportunity to re-engineer how we assess and track learning. The study of human development and neuroscience has expanded significantly. We know much more about how humans develop and the various ways learning happens in the brain (see next page SoLD Alliance's Essential Guiding Principles for Equitable Whole-Child Design).[4] But our current education system was designed for industrial efficiency, before we knew as much about young people's learning and developmental needs. And finally, **disruptions from the COVID-19 pandemic** demonstrated what many already knew to be true - one-size-fits-all schooling neither reaches allstudents nor fosters lifelong learning.
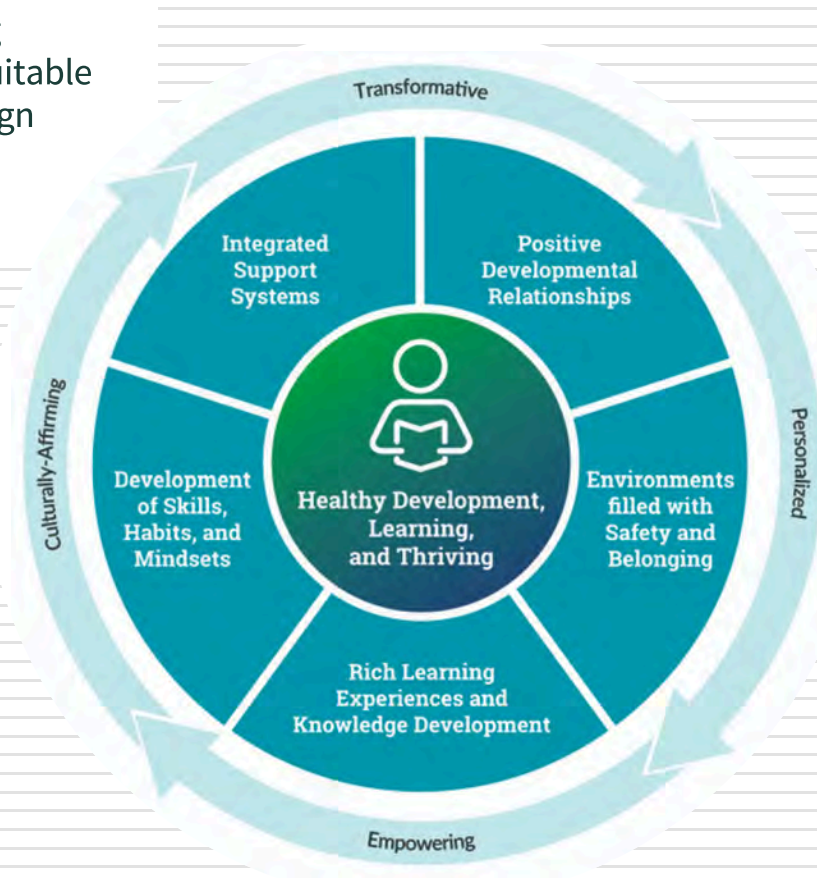

Photos courtesy of Big Picture Learning

[4] The Science of Learning and Development Alliance (SoLD)

Outside of school, employers are making clear that they need employees to arrive with a different set of skills to succeed.[5] Today's public school settings are now so outmoded and contradictory to most modern workplaces that employers are bearing the weight of re-educating new employees to be the problem-solvers, innovators and collaborators they need to remain viable - or are simply unable to fill the positions needed to sustain and grow their businesses. The current public education system's narrow metric of success in terms of state test scores and graduation requirements has overshadowed employers' need for graduates who are not waiting to be told what to do and how, but instead possess content knowledge and can collaborate on diverse teams, innovate, and create solutions. These are the skills students need to possess if they are to thrive in today's workplaces, as well as future workplaces we have yet to even imagine.

Essential Guiding Principles for Equitable Whole-Child Design (SoLD Alliance)

Transformative

Integrated Support Systems

Positive Developmental Relationships

Culturally-Affirming

Personalized

Development of Skills, Habits, and Mindsets

Healthy Development, Learning, and Thriving

Environments filled with Safety and Belonging

Rich Learning Experiences and Knowledge Development

Empowering

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[5] America Succeeds partnered with Emsi Burning Glass to analyze 82 million job postings from the past two years (2019-2020) to quantify that 7 of the 10 most requested skills in job postings are for Durable Skills: leadership, character, collaboration, communication, creativity, critical thinking, metacognition, mindfulness, growth mindset, fortitude.

An Equitable Future-Ready Learning Ecosystem
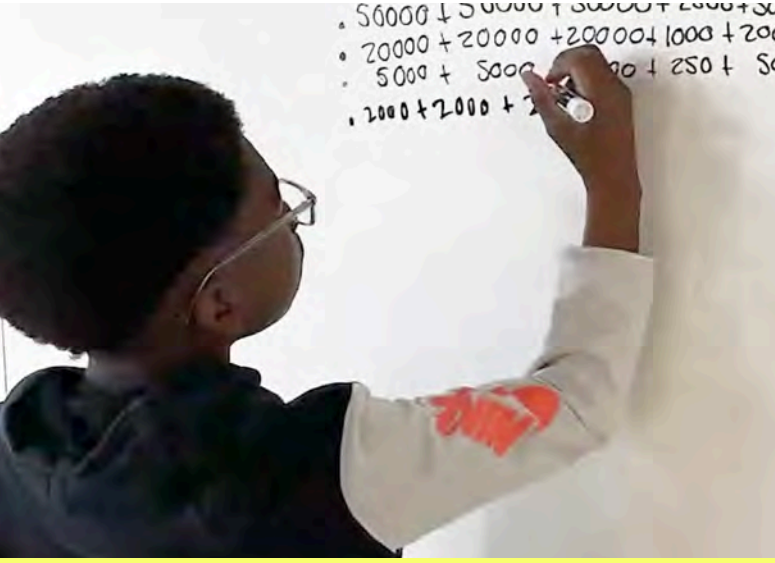
Conversations with education innovators, parents, policy makers, employers, and market researchers provide growing clarity that our current efficiency-based architecture is insufficient, and tinkering around the edges of that entrenched system will not lead to the changes or outcomes our students need. While the structure of an ecosystem that allows for different, more flexible and active learning with a high bar for excellence and equity is not yet entirely clear, it is not entirely theoretical either. There is a picture coming into focus - combining lessons and insights from decades of progressive pioneers, coupled with innovative technology enhanced tools and infrastructure, and advances in the science of learning and development that together make possible a new approach to enabling, tracking, assessing, and crediting a wider array of learning outcomes - allowing leaders to push beyond the boundaries of the old traditional system, with rigor, at scale, and with equity baked in.

What is needed is a system that combines the modernized knowledge, competencies, and mindsets to set students up to thrive in life, participate in a diverse democracy, and attain a family sustaining wage in the age of AI.[6] What we learned in our research, and see observationally as parents and employers, is that our students need to learn how to learn. They need to know how to reflect on their own knowledge, development and gaps, to drive ongoing learning cycles, to engage in an increasingly diverse world, to be curious and to tackle complex problems, and to build these skills while working collaboratively in teams.[7]

What is coming into focus is a new paradigm - an entirely new way of architecting systemic learning. This emerging paradigm will enable students as active learners preparing to be lifelong learners, problem solvers, and creators in our future economy, society, and democracy. In this learner centered ecosystem, following the direction of well established learning science, student agency is at the core, centering learners as the most important actors in driving their own learning. With the support and guidance of a robust community in which each student is known, connected, and engaged, learners define their path, own their data, and pursue their goals.

A new paradigm that enables students to be:	
	• Active Learners
	• Lifelong Learners
	• Problem Solvers
	• Creators

Future Examples Based on Existing Innovations

What might this new paradigm look like? Below are three brief vignettes - hypothetical, but informed by real world innovations - showing possible futures from the perspectives of a student, parent and teacher.[8]

Student: Ovidio

Ovidio is a 14-year-old who recently moved to the United States and enrolled in his local public learning hub where he engages with other kids across a range of ages, and adults who support him. At this hub, which is connected to the public service providers and employers in his community, he was assigned a learning navigator who guided him and his family in the creation of an individual learner profile to determine how Ovidio learns best, to identify goals for his future and develop a learning pathway centered around his love of science, to identify and sequence the steps he needs to reach his emerging interest in a STEM-related career. He is obsessed with science labs, and has participated in VR simulation labs. Ovidio's "navigator" engaged with the learning hub's local university lab to schedule a weekly internship and provide transportation for Ovidio to work alongside lab technicians while earning credit. All of his learning is tracked in one learner record that Ovidio and his parents own and can modify as they see fit.

Parent: Shakira

Shakira is a Pittsburgh-based web designer and the mom of three children, ages 6, 8, and 16. Her youngest child, Jeremiah, loves to invent, design and build new things. He was screened at an early age (like all young people), and diagnosed with language-based learning differences. Upon reviewing Jeremiah's results, his school's integrated school support specialist (ISS) recommended an online Orton-Gillingham trained tutor and Shakira chose a highly-qualified, experienced tutor based in Boston, with whom Jeremiah will meet online 1:1 for one hour each weekday to receive systematic phonics-based instruction. To ensure her son's love of designing and building is fostered, his ISS identified Remake Learning Days' Maker Learning Collaborative and Shakira enrolled him. Her oldest daughter, Olivia, attends a nearby school, where she's enrolled in a popular college course with a university professor Zooming in, while an educator in her school helps her plan and work through assignments, developing her executive functioning. Olivia's in and out of school work is compiled in a competency based transcript she can share when she applies to a job or college.

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[8] The vignettes explain possible futures that may involve changes in how students attend school each day for purposes of custodial care, how students use transportation to/from school as well as other services such as nutrition, medical and other wrap-around services. These brief vignettes hint at, but do not make explicit the details, logistics, and funding of these critical factors as there is immense work ahead to determine how they may be operationalized at scale in a future ready system.

Teacher: Rae

Rae completed the ASU Next Education Workforce program and has been teaching students ages 13-15 with a team of teachers at a local education center for the past 2 years. Her school is developing a portfolio defense system, and she wants to begin incorporating more performance based assessments, so she enrolled in an edsUP module to build her skills. She is also meeting twice weekly with a mentor teacher, Jesse, a 10-year veteran teacher who recently began job sharing after he had his first child. Jesse began by modeling performance-based assessments with Rae's students, then reviewing them together with Rae and is now supporting Rae as she develops her own. One group of Rae's students wants to create and perform a play for their assessment, so Rae connected them with the director of their local community theater, who is now instructing them and providing support. The students will perform and be assessed by a panel of community leaders using a common rubric. A classmate studying media production will record the performance so it can be included in the group's digital portfolios.

These vignettes illustrate the ways in which parents and students have the opportunity, access and support to choose different learning experiences for a range of different reasons to support their individual needs and ensure they are set up to thrive. The stories illustrate fundamental shifts in our current system toward student agency that honors individual student profiles while simultaneously providing the flexibility that uplifts educators' unique strengths, capacity and supports their needs.

The Current State of Education

Our predominant education system was designed for sorting and efficiency in a factory-based economic period, to move students through preset curriculum in age-based "grade levels," with timebased course progressions (semester, quarter, class seat time), one teacher in front of many passive students, teaching to an "average" student. Yet, as Todd Rose's **End of Average** illustrates, the design parameters of an "average" learner and learning measured by time are misguided, because every individual learner has a "jagged" profile - quick to master some things, but needing more time for others.[10] The traditional system rewards students who are compliant, obedient, passive, linear learners. It permits almost no time for students to inquire, engage in active learning, wonder, imagine or design - all skills that help to differentiate humans from AI.

When we asked parents and students what skills they need for success in today's world, things like problem-solving, collaborating across differences, adaptability, creativity, and communications top their list.[11] And we know employers do not want mere compliance, they want "durable skills" like tenacity and analytical thinking.[12] In a world made up of highly variable learners and complex skills needed for our modern world the traditional education system cannot meet our needs.

In analyzing how to move towards the modernized and future-ready system we need, we noticed confusion - and we realized it's due in part to the fact that we currently have three versions of the education system coexisting right now.

"We've absolutely reached the peak potential of the industrial model of education."[9]
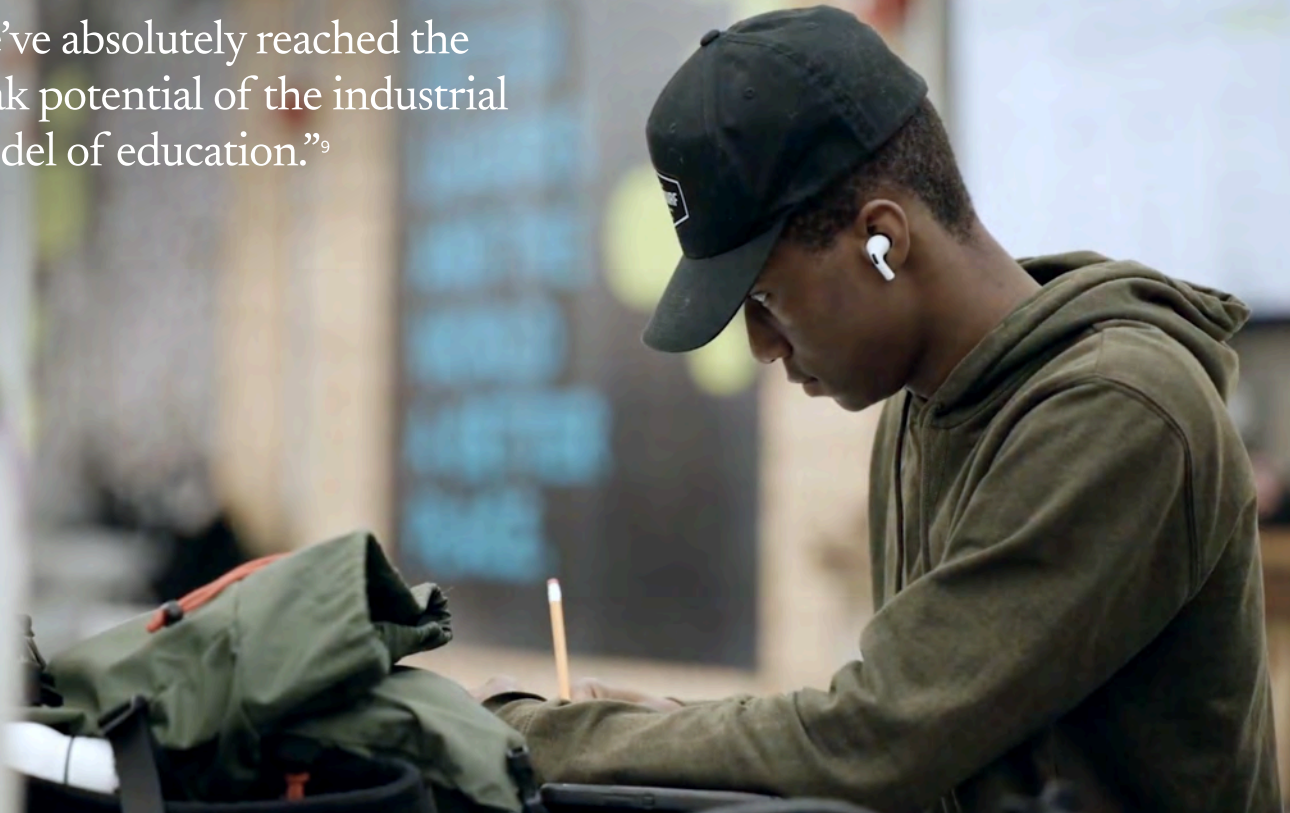
[9] Presentation from Jenee Henry Wood, Head of Learning at Transcend Education
[10] Todd Rose, End of Average
[11] LearnerStudio empathy interviews with parents, students
[12] For more information on Durable Skills, see: https://durableskills.org

There is confusion because of multiple "systems" operating at once.

Traditional Efficiency to organize and sort

- Creating a system of public schools, districts
- Grouping students by age, content by grade levels
- Standardized testing to compare/measure
- The Carnegie Unit

Efficiency Innovation for equitable proficiency in school

- Disaggregated data with a focus on racial and income based achievement gaps and databased decision making
- Computers, internet, advances into adaptive edtech
- Awareness of school design, coherence
- Some parent agency through magnets, charters and homeschooling
- Social Emotional Learning (SEL)

Future-Ready Ecosystem for equitable success in life

- Equitable access to student-centered learning opportunities
- Advances in science of learning and development (SoLD)
- Competency and mastery based
- Student and parent agency
- Crediting learning within and beyond the classroom
- Flexible "educator" roles, use of time, space
- AI, blockchain, web 3.0– things we do not fully understand yet

Traditional Efficiency

to organize and sort

This is the system most of us associate with schooling. Many, if not most of our young people sit in schools created as part of our traditional compulsory-based system of education - designed for sorting and efficiency in a mass production and industrial era. Schools are organized in grade levels by age and learning is passive, and parsed into narrow subject areas organized into time blocks and curricula called "Carnegie Units." Historically, this system perpetuated racial and income inequity, designed around residential access which was redlined and segregated along racial and income levels. And it provides little to no ability for parents or students to make active choices about their public schooling, beyond where they live.[13]

Efficiency Innovation

for equitable proficiency in school

This second system is operating in parallel to and often within the traditional model, with innovations pushing against the constraints of the old rules. This system's definition of success is usually proficiency in test scores in math and English language arts - which are necessary but not sufficient - and are largely measured by standardized tests and school-based metrics focused on improving systemically marginalized students' proficiency in school. Important innovations are aimed at closing race/class achievement gaps with respect to success in school, some limited expansion of parent agency and voice (often via charter schools), some increased personalization through tech-enabled learning[14], applied or project based learning, and a focus on social and emotional learning as part of early beginnings to a "broader definition of student success."[15] These schools innovated to prepare students for a knowledge-based economy, and to increase equity - which represents important progress. But the innovation is often small-scale and constrained by the old efficiency rules.

Future-Ready Ecosystem

for equitable success in life

The focus of this paper is a new learner-centered ecosystem - that is agentic[16] (with student agency at the core), and that has a definition of success as thriving in life, careers and democracy, not merely success in school. This system is only operating in small emergent pockets, and involves reengineering beyond the traditional approach in order to prepare students to be lifelong learners, problem solvers, and creators in our emergent future economy, society, and democracy. It requires shifting from "schooling" towards more focus on deeper "learning." With the support and guidance of a robust community in which each student is known, connected, and engaged, learners have agency to define their path, own their data, and pursue their goals.

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[13] Devin Vodicka, Learner-Centered Leadership
[14] eg: Summit Learning
[15] eg: NewSchools Venture Fund
[16] A term initially created by Next Generation Learning Challenge (NGLC)

Building upon work by many visionary innovators, the emerging picture of this future ready ecosystem seems to be characterized by the **seven principles** listed below:[17]

Key Principles of a Future-Ready Learning Environment

Learner-Centered [18]
personalized, and community connected, with student agency at the core

Flexible
anywhere, anytime learning, multiple pathways, flexible adult roles

Equitable
designed and built for equity

Agentic
learners and families have agency

Competency-Based [19]
with mastery-based progression

Grounded in SoLD*
context, relationships and motivation are central to learning

Rigorous
expectations for academic content, skills, and mindsets

*Science of Learning and Development

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[17] Many people have developed core approaches to this work including Transcend, NGLC, Education Reimagined, LEAP Innovations, BELE Network, KnowledgeWorks, Aurora, LCC, Getting Smart .
[18] Personalized learning is often supported by an individual learning plan
[19] See Aurora Institute's definition of competency-based learning: active learning, pathways to skills with varied pacing, and evidence of mastery, not seat time.

As the chart below indicates, the traditional efficiency system (see H1 below) is what the majority of our students experience. An estimated 91% of students attend district and charter public schools, most of which can be characterized as traditional, efficiency schools.[20] But we see indications that the traditional model is in decline. Parents are increasingly dissatisfied and are supplementing and exiting the traditional system in accelerating numbers.[21] Teachers' jobs are not sustainable and the pipeline for educators is declining as a consequence[22] with the majority of teachers not recommending others enter the field.[23] Learners are struggling with mental health challenges[24], feeling disconnected, and saying that school is not helping, not relevant, and not preparing them for their future.[25] Although some important reforms exist in the proficiency system and are reaching increasing numbers of students - like those aimed at increasing equity of access and attainment, adding in more social and emotional learning (SEL), and increasing parents' agency through charters and district choice - their growth and depth of innovation has been limited by the rigid infrastructure, accountability constraints and funding mechanisms of the traditional efficiency architecture.

Three Horizons Model
Adapted from International Futures Forum

Traditional Efficiency

Efficiency Innovation

Future-Ready Ecosystem

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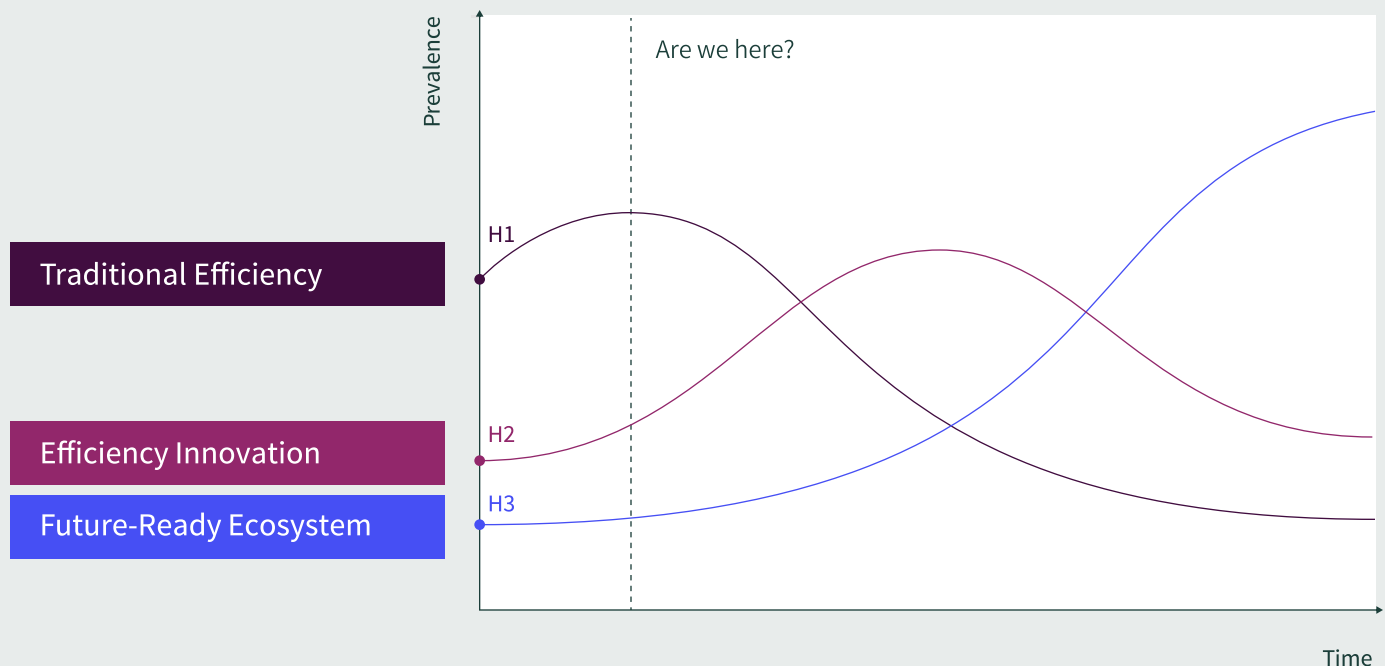
[20] National Center for Education Statistics (2022)
[21] Gallop Poll (September 2022) found that 55% of Americans are dissatisfied with K-12 education.
[22] AACTE (2022) National Portrait and the 2022 survey by the National Education Association.
[23] NEA's 2022 report Elevating the Education Professions: Solving Educator Shortages by Making Public Education an Attractive and Competitive Career Path
[24] CDC's Youth Risk Behavior Surveillance Data Summary & Trends Report: 2011-2021
[25] Edge Research and K12 Inc. "State of the Skills Gap: Perceptions of the role high school plays in preparing students for success in career."

Steps Towards a Future-Ready Paradigm

As we think about moving to a world in which student agency is centered, it's important to note that we are not starting from scratch. Through our conversations, and our review of historical and existing learning environments, we see starting points at every "lever" of the system*. Commonalities emerged that we have synthesized in the table below and explained in more detail in Appendix 2.
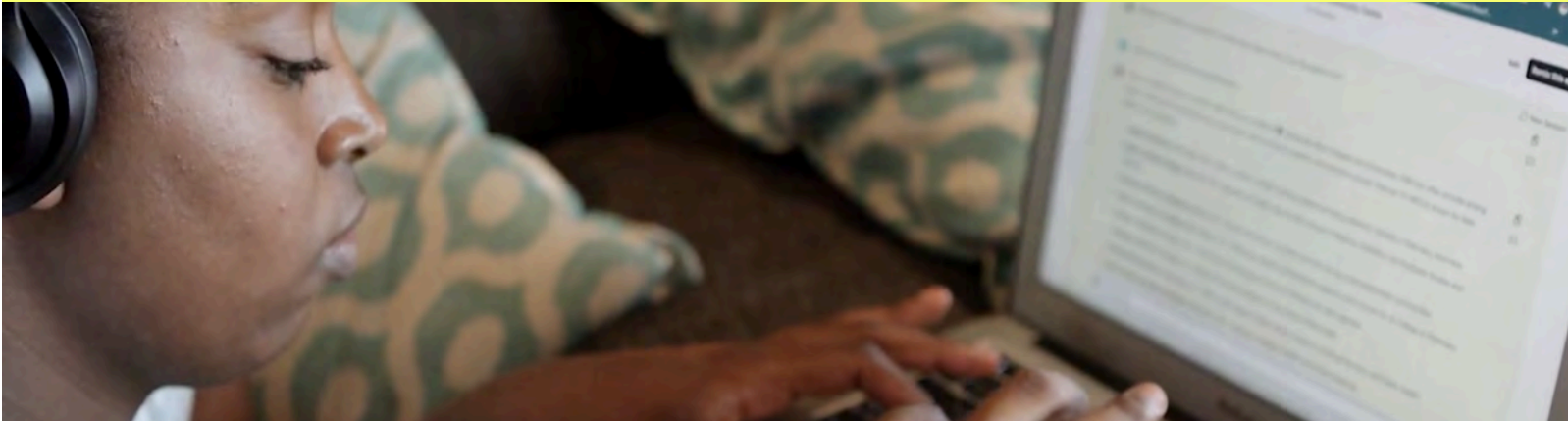
The levels that will build **a new paradigm**

THE WHY

A new paradigm is needed because the current traditional efficiency system is failing to meet the needs of students, parents, educators, employers and our society. Individual thriving and collective problem solving both require a new approach.

We need a new paradigm that supports:

- Active learners who can solve emerging problems, and drive their own continuously learn
- Learners ready to thrive in careers in a hyperpersonalized, technology-based society
- Empathetic community members who are

THE WHO

Previously called "teacher" or "educator," the new who includes trained educators as well as flexible roles for other adults.

- Professional, trained educators (teachers, curriculum designers, school leaders)
- Mental health professionals, counselors, therapists
- Tutors with highly specialized content area expertise who can work 1:1 or in small groups
- Academic and enrichment coaches, mentors, near-peer coaches
- Navigators and student support coordinators, who help students build pathways to their future
- Mentors and community and business professionals outside of education who share real-world expertise

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*Others have been looking at the need for and elements of this new paradigm in similar ways. See Radical Departures from TFA Reinvention Lab and The Future of Smart by Ulcca Joshi Hansen.

THE WHAT

Previously called "content," the new what includes **modernized** content knowledge, in combination with broader competencies for success in life, the future of work, healthy, diverse communities and democracy, and collective problem-solving for the greater good.

- Modernized content with mastery-based progressions and rigorous expectations and measurement
- Focus on science of learning and development (SoLD and SEL) Competencies for the future of work, thriving in life and participating in diverse democracy
- Skills and mindsets for collective problem solving
- Metacognition - learning to learn, and to pursue continuous cycles of do-reflect-learn

THE HOW

Encompassing "pedagogy" or "teaching and learning" the **how** of learning involves the act of and tools for instruction, efforts to measure and credit progress, ways of organizing time and place, and new ways of defining learner and educator roles.

- Student agency and personalization
- Active learning, community-engaged and embedded learning
- Learning models and school designs
- Family agency and active engagement
- Accountability for useful information on quality
- Measuring progress: assessing and credentialing

THE ENABLING ECOSYSTEM AND INFRASTRUCTURE

The elements that need to emerge for a new paradigm to be scaled and sustained.

- Ecosystem development to create an integrated system that supports innovation and guards against innovation happening in isolated pockets
- Infrastructure (tech and others) to enable flexibility in where learning happens, how credit is provided
- Thought leadership, policy innovation (including funding), R&D, and leadership development Intermediaries, coalitions, and change management capacity
- Movement building, communications, mindset-shifting

*Others have been looking at the need for and elements of this new paradigm in similar ways. See Radical Departures from TFA Reinvention Lab and The Future of Smart by Ulcca Joshi Hansen.

What Do We Need Philanthropy To Do

To meet this moment - where parents, learners, educators, employers and the broader community aregetting clear our education system is not able to deliver what learners and communities need - willrequire intentional redesign and re-engineering of our $870+BN education system. This transition isalready underway, with many talented visionaries and innovators shaping new solutions as described in the "Building the Future" table below. The recent disruption caused by the pandemic and generative AI(ChatGPT etc.) should make it clear that the question we should be asking is not, as some suggest,"whether" the system is going to fundamentally change. What we need to be asking are questions like:

How will we factor in the public good alongside individual learners' needs as the system changes?

At what pace will this shift happen?

Who will get access first?

Who will get what amount of agency, choice, and power?

Who will the new system be designed to benefit?

How can we ensure equity is at the core of the new paradigm?

This rearchitecting will require significant investment of intellectual, human, and financial resources from across public, private and nonprofit sectors, as well as perseverance and patience over the next decade or more. The public sector's strength is addressing the last mile and ensuring those most in need get served, but it is frequently hamstrung by the need to manage the existing system, even moreso in a politically fractious time. The private sector - which in other industries drives innovation - in education is focused on current revenue inside the efficiency system. And funding for disruptive innovations from early stage investors is mostly focused on well resourced parent buyers outside of the system. And, at the same time, institutional interests within the current system are designed around hardwired incentive structures that resist change - including things like: testing requirements, textbook adoptions, teacher training and credentialing requirements, and more recently tutoring revenue stream set-asides. All of these revenue streams were originally set up as ways to encourage quality, but they now also serve as barriers to important change.

Philanthropy needs to fuel the shifts already underway to help overcome systemic inertia.

Given these constraints on public and private sectors, and because the ecosystem changes underwayare paradigmatic we will need the philanthropic sector to make a much more sizable, long-term andproactive commitment of resources to ensure equity is baked into the emergent system architecture,and to make sure communities, educators, and mission driven innovators are a part of leading us intothe future.

> We will need the philanthropic sector to make a much more sizable, long-term and proactive commitment of resources to ensure equity is baked into the emergent system architecture, and to make sure communities, educators, and mission driven innovators are a part of leading us into the future.

There are many ways to support reinvention of the system to meet young people's needs in today's world, from smaller shifts that pave the way for a new model while also meeting current challenges (e.g: new ways to meet teacher shortages and "unfinished learning," or creating interoperable data systems) to large long term bets that build ahead of the adoption curve into a reinvented system (e.g:, SEL competency assessments or cross-silo learning and employment records or integrated competency frameworks). The challenge we implore the philanthropic community to meet is to ensure in this paradigm shift that all our learners and communities are included, and that we truly meet the moment with a modernized, flexible, engaging, and rigorous ecosystem architecture for learning.

Years of experience in and alongside philanthropy have taught us that philanthropic funders have specific and sometimes idiosyncratic ways of engaging in social change. Typically each is driven by an underlying theory of change, which then translates into a set of investment areas, often representing a subset of the strategic levers in a system. This is understandable, given the complexity of the system, and a desire to focus and develop expertise. But it is problematic at paradigmatic change moments like this, where we need all of the systemic levers to move in a relatively coherent and connected way.

While support from individual funders toward single levers can play an important role, this moment calls for more than funding fragmented projects and point solutions. It requires sustained general operating support for interconnected efforts across multiple levers, and unprecedented collaboration amongst funders, practitioners, policymakers, researchers and stakeholders.

Philanthropic funders generally have a particular risk/ return profile - some have trustees or principals willing to place sustained or bold bets, others choose to move in a more incremental way towards what can add up to larger changes over time. Given that, we have organized our description of opportunities below into key strategic levers (rows, corresponding to the levers outlined above) and with a broad brush categorization of lower-middle-higher risk/reward profiles (columns). To make the work more concrete, we provide examples, but these examples are meant

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to be illustrative, not exhaustive with a focus almost exclusively on nonprofits. For a somewhat larger list of organizations, see v1.0 of a LearnerStudio and TLA developed map from 2022. All of these opportunities focus on the transition to a future-ready ecosystem as described in the change model above.

Funding Opportunities For a Future-Ready Ecosystem

Moving into a new paradigm of learning in order to meet our future needs - as individuals, communities and collectively - can feel overwhelming and risky. But the greater risk is in not acting, thus allowing the changes to emerge in fragmented ways that do not factor in our collective goals for equity, access, and the public good. If we want to ensure the success of our current and future generations, we don't really have a choice about whether to change our education and learning systems, rather just about how and when. Now - when this shift is emergent - is an important opportunity for philanthropy to help by enabling

equitable, agentic ecosystems addressing both individual and common goods. As Gisele Shorter, CEO of the Nellie Mae Foundation, describes the moment, This work will take time, likely decades. Philanthropic support and commitment over time are critical to realizing this vision of a powerful and much needed new paradigm for education and learning. There are many early innovators and thought leaders paving the way. The work calls out for learners, educators, parents, communities and funders to join forces to intentionally co-construct our future together.

"Parents, educators, and policymakers need to work together to reshape how kids learn and experience school. So much recent upheaval makes this a challenging, but also opportune, time to make it happen."[26]

[26] Gisele Shorter, "Collaborating in Community: Philanthropy's Role in Cultivating Equitable K-12 Learning Environments" March 30, 2023

Funding Opportunities For a Future-Ready Ecosystem: The What

The below tables provide descriptions of the various types of opportunities where philanthropy can support critical levers for the creation of a future ready education system. An enhanced version of this table which includes arobust, yet not exhaustive, list of illustrative examples is also available.

CLICK HERE FOR ILLUSTRATIVE EXAMPLES

	Enhancing	Propelling	Unleashing
Key Characteristics	**Lower Risk/Reward** Supplementary to the existing system, minimal structural change, generally led by known operators	**Medium Risk/Reward** Shifting the system to push in new practices and pave the way for more experimentation, often led by newer organizations.	**Higher Risk/Reward** Bold structural ideas, often requiring policy changes, that may not exist yet, often led by new individuals and organizations.
What It Provides	Opportunities to try new ways of operating	Onramps to/proof points for new ways of operating, and expanded definitions of success.	Pathways for a new system with emerging guardrails for equity
Critical Levers Detailed definitions on page 24	Previously called "content," the what is modernized, narrowed knowledge, in combination with competencies for success in life, the future of work, and in creating healthy, diverse communities and democracy, as well as collective problem-solving for the greater good.		
Modernized content with mastery-based progressions	Expanding the definition of student success Modernized content inclusive of skills and competencies	Enabling personalized or mastery-based content progressions Applied learning in modernized subjects like engineering and STEM	Cross-disciplinary problem-based learning with rigorous outcomes and goals Flexible personalized pathways (not seat time)
Focus on Science of Learning and Development (SoLD)	Relevant and community engaged content* Pedagogies aligned with what we know works for basic skills e.g.:science of reading SEL tools that strengthen belonging, and mental health supports	Embedded mental health support and approaches Pre-service and in-service SEL training for educators; mental health support for educators	Designed around a healthy foundation of mental health and SEL for every learner SEL-enhancing summer programs

The "What"

		Enhancing	Propelling	Unleashing
The "What"	Competencies for the future of work and society	Competency frameworks and translational tools Developing student competencies in data sciences and AI	Competency frameworks in workforce development, SEL, civics Repository for emergent competencies that connects to research on efficacy Connections across silos of workforce development/ K-12 competencies	Advancing youth leadership capacities Digital learning and employment records and individual learner plans - and links between the two
	Collective Problem Solving	Expand ways to inspire collective problem solving, like active civics	Civics competencies Youth led problem solving, e.g.: advancing youth leadership capacities, and civics skills and competencies	Universal requirements for citizenship and collective problem solving e.g.:require students to pass citizenship test and complete one year of national/community service; policies for youth agency and power in schools
	Self reflection & learning to learn	Engage students in proactive lifeplanning	Make "next step planning" high school requirement Tools and infrastructure for pathways(and reflection practices) Executive functioning tools	Explore technology to build students' self reflection e.g.: assistive technology and gamified learning

Funding Opportunities For a Future-Ready Ecosystem: The How

The below tables provide descriptions of the various types of opportunities where philanthropy can support critical levers for the creation of a future ready education system. An enhanced version of this table which includes arobust, yet not exhaustive, list of illustrative examples is also available.

CLICK HERE FOR ILLUSTRATIVE EXAMPLES

	Enhancing	Propelling	Unleashing
Key Characteristics	**Lower Risk/Reward** Supplementary to the existing system, minimal structural change, generally led by known operators	**Medium Risk/Reward** Shifting the system to push in new practices and pave the way for more experimentation, often led by newer organizations.	**Higher Risk/Reward** Bold structural ideas, often requiring policy changes, that may not exist yet, often led by new individuals and organizations.
What It Provides	Opportunities to try new ways of operating	Onramps to/proof points for new ways of operating, and expanded definitions of success.	Pathways for a new system with emerging guardrails for equity
Critical Levers Detailed definitions on page 24	Sometimes called "pedagogy" or "teaching and learning" the how of learning involves the act of and tools forinstruction, efforts to measure and credit progress, ways of organizing time and place and defining learner andeducator roles.		
Student agency and personalization	Recognize and embrace learner variability Enable student voice Project or course level student agency Student driven projects outside of school	Models for "agentic learning" Resources to help students navigate broader range of opportunities Regional digital opportunity maps (to enable counselors/ navigators)	Completely learner-driven school models Partially student-driven school and microschool models Emergent learner generated models and tools
Active learning, community-engaged learning	Pedagogy to support active learning Tools to provide VR/AR experiences (particularly in rural areas)	Community engaged in defining outcomes and metrics, e.g.: state defines portrait of a graduate, exemplars and guardrails, with local community engaged in design process	Learning beyond classroom, with business and community partnerships

The "How"

		Enhancing	Propelling	Unleashing
The "How"	Learning models & school designs	Learn from existing competency-based models Codify and share practices of existing innovative models Summer credit recovery designs to include innovative ways to increase motivation and engagement Pilots with out of school organizations that communicate progress to students' schools or caregivers	Design partners and operators in collaboration with educators and stakeholders. Connect tools development to practitioners and real users in the field Designs for summer opportunities for active competency-based learning combining content, skills and SEL to accelerate and broaden learning	A national competition for models combining new ways of operating with aligned technology tools and infrastructure With intermediaries, build critical tech tools that pave the way for accelerated change Reengineering connections from state level to local/regional proof points
	Parent agency & engagement	Provide parents with program-level substantive choices e.g.: tutoring, enrichment Engage parents in new roles Support existing parent organizations to focus on the new paradigm,	Parent navigation tools with better information on what kids need to know and be able to do, and alternative places to access resources Create ways for parents to engage in defining and accessing a future-ready system	Provide parents with equitable publicly funded ways to make choices for supplemental and enrichment programs. Support efforts to create equitable, flexible, learner-centered funding mechanisms that combine parent agency with public guardrails, so parents can make real choices about what works for their students for core learning.
	Credentialing or crediting learning	Reshaping credentialing, compiling evidence of learning to build the learning process itself Creating tools and frameworks to translate badging to crediting Teacher-led credentialing	Expand credit granting beyond "courses" to include out of school learning New "diplomas" and translate them for colleges and other consumers	Mission-driven tools for student ownership of credentials data and transcripts Collaborative efforts to define guardrails for equity and access in the private sector for AI tools in tracking, credentialing and verification.

		Enhancing	Propelling	Unleashing
The "How"	**Talent: flexible and diverse educator roles and pipeline**	Innovative roles in current system, Identify adult competencies for new roles like navigators of and success coaches Diversify pipeline and leadership Advocate for policy changes with teachers' and principals' unions to ensure new roles are effective, sustainable and fulfilling	Develop new modular/ flexible roles Combine effective AI-enabled tools for faster mastery AND repurposing of human/relational time Create pipelines of different career stage adults e.g.: older (retired) and younger (college tutors) adults to work with students in different contexts	Competency based teacher development and upskilling tools that are scalable for PD Collaborative efforts to remove policy barriers: licensure flexibility, policy changes to enable more flexible jobs and more kinds of adult roles, including student success coaches, navigators and some roles not based in schools Deep shifts and redesigns for innovation and policy work with teachers' and principals' unions on redesigning roles in and outside traditional bounds of "classes" that enable flexibility for adults and students, ensure excellence
	Measuring progress, assessments	Broadening of assessments for learning Definitional R&D on measuring or tracking contextual factors and "school success" leading indicators Regional pilots of new assessments	Further develop and implement early learning screen Support AI-enabled batching so human scan apply their judgment in assessing Sophisticated and tech-enabled self reflection/ metacognition assessments Workforce development, enrichment (i.e.badges) or employment performance "assessments" models that could translate to grades 6-12.	Support efforts to move from narrow standardized testing, to mastery based, and embedded assessments e.g: simulations, statewide stealth assessments Partnerships like Carnegie/ ETS re:assessing broader set of competencies Tools and designs to rework core infrastructure around rigorous, competency based and mastery progression assessments
	Accountability	Support collaborations to define what "rigor" looks like in a mastery-based and competency-based system.	Collaborative design to redefine "accountability," including districts or states developing new approaches Racial equity advocates' collaboration to develop new forms of accountability in a future-ready flexible system	Collaborative design for parent and student agency to be a form of public system accountability (like it is in private schools)

Funding Opportunities For a Future-Ready Ecosystem: Ecosystem, Intermediaries and Change Management Capacity

CLICK HERE FOR ILLUSTRATIVE EXAMPLES

	Enhancing	Propelling	Unleashing
Key Characteristics	**Lower Risk/Reward** Supplementary to the existing system, minimal structural change, generally led by known operators	**Medium Risk/Reward** Shifting the system to push in new practices and pave the way for more experimentation, often led by newer organizations.	**Higher Risk/Reward** Bold structural ideas, often requiring policy changes, that may not exist yet, often led by new individuals and organizations.
What It Provides	Opportunities to try new ways of operating	Onramps to/proof points for new ways of operating, and expanded definitions of success.	Pathways for a new system with emerging guardrails for equity
Critical Levers Detailed definitions on page 24	The elements that need to emerge for a new paradigm to be scaled and sustained.		
Ecosystem development	Leadership development for innovation, R&D, future ready systems Vision, capacity and field building organizations	Collaboratively developed taxonomy for the new paradigm, and related network field mapping Bring systems engineering into collaborative design with education innovators	Connect to global efforts creating a new paradigm Intermediaries working with communities to galvanize a shared vision of, and will for, transforming towards a new horizon of learning Network convening and weaving - integrating systems change networks

Ecosystem, Intermediaries, and Change Management Capacity

		Enhancing	Propelling	Unleashing
Ecosystem, Intermediaries, and Change Management Capacity	**Infrastructure**	Data interoperability - support coalitions and expansion of existing efforts Support collaborative efforts to identify where we need public purpose "utilities"	Scalable ways to track/ connect in and out of school learning Coalition for K12 education-specific learning+employment record inspired by the T3 Collaborative, US Chamber of Commerce Educator-informed platforms to support changing operational practices in courses, locations, and to capture modular progress	A collaboratively governed equity enabling "learning and employment record" Operational infrastructure enablers for learning beyond classroom Infrastructure to enable regional proof points combining competencies, active learning and crediting in and beyond schools for learning in communities
	Measuring progress, assessments	Collaborative learning on key policy and implementation efforts Capacity building (TA) for implementing new learning models Organizations to transition existing orgs into future Organizations and coalitions emerging to addressing ethics and bias in AI	Removing policy barriers to competency, mastery and student centric systems Support model state policy connecting portrait of graduate and implementation Research on alternatives to the Carnegie Unit that prioritize equity and special needs Collaboration to shift educator credentialing to flexible, competency-based	Removing policy barriers to pilot new models for flexibility in who can teach, when and where Innovations in state policy for competency progressions and new approaches to "accountability" District systems to integrate in and out of school learning
	Accountability	Intermediaries to nurture early innovators Formation of issue-specific coalitions (data interoperability, R&D funding, AI ethics) Grants for complementary organizations to work together rather than duplicate efforts Connect innovative current practitioners to pave the way for the new paradigm Convenings to create relationships and trust across divides	Convenings and collaborations across diverse groups (including system engineers, designers, community leaders, and domain expertise to develop coherent vision Coherent messaging - collaborative efforts to inform campaigns and coherence Collaborative engagement among innovators and key institutional membership organizations like AASA, unions, AACTE, and NSBA.	Collective Action - support additional staffing needed for coalitions to be able to move on collective action agendas Capacity and messaging to create a wide political base for the future-ready system we need i.e. multiracial, cross-partisan, and across rural, suburban and urban - in service to all of our communities and learners System change campaigns to help shift mindsets connected with a new future (demand building /mindset shifting)

List of Conversants

The following were engaged via virtual interviews or in person event.

Aaron Feuer	Diane Tavenner	Julie Squire	Priti Agarwal
Adam Carter	Dottie Smith	Kara Bobroff	Raj Vinnakota
Adam Peshek	Edward Hui	Karen Hawley Miles	Ray Girn
Alec Resnick	Emily Liebtag	Katie Giles	Rebecca Goldberg
Alejandro Gibes de Gauc	Emily Hassel	Kimberly A. Smith	Robin Lake
Alex Spurrier	Eric Chan	Kriste Dragon	Ryan Mick
Amanda Fernandez	Eric Gordon	Lakisha Young	Sandra Moumoutjis
Amy Junge	Erin Mote	Laura Slover	Sarah Allan
Andrew Clark	Fernande Raine	Laura Tavares	Sarah Giddings
Andrew Frishman	Frances Messano	Lauren Cole	Saskia Levy Thompson
Andy Calkins	Gisele Shorter	Leah Hamilton	Scott Bess
Anna Leonhard	Grant Lichtman	Leo Bialis-White	Scott Laband
Antonia Rudenstine	Greg Gersch	Lisa Hicks	Shavar Jeffries
Aylon Samouha	Gregg Behr	Lisa Snell	Shrikant Jannu
Barbara Pape	Heather Kirkpatrick	Lizzette Reynolds	Shruti Nagarajan
Ben Erwin	Helayne Jones	Macke Raymond	Shruti Sehra
Ben Kornell	Henry Hipps	Manoj Kutty	Soenda Howell
Beth Rabbitt	Holly Morris	Margaret Horn	Stacey Childress
Betsy Corcoran	Jamie Jutila	Marguerite Roza	Stefanie Sanford
Brent Maddin	Janelle Wood	Mark Murphy	Sujata Bhatt
Brian Greenberg	Jason Glass	Mary Ryerse	Susan Patrick
Brooke Brizard	Jason Atwood	Mary Wells	Tequilla Brownie
Bryan Hassel	JC Brizard	Matt Wunder	Theresa Ewald
Caleb Offley	Jean Desravines	Melanie Dukes	Thomas Gaffey
Cameron White	Jeff Wetzler	Meredith Olson	Tim Knowles
Caprice Young	Jeff Jablow	Michael Horn	Tim Taylor
Carlos Beato	Jeff Snipes	Michael Robbins	Todd Kern
Caroline Hill	Jeff Wetzler	Michele Caracappa	Tom Gaffey
Carrie Bakken	Jen Groff	Michelle Culver	Tom Vander Ark
Cecily Adams	Jenee Henry Wood	Michelle Heaton	Tyler Samstag
Charles Fadel	Jennie Niles	Michelle Rojas	Ulcca Joshi Hansen
Chip Linehan	Jennifer Groff	Mike Flanagan	Veronica Crespin Palmer
Chris Rush	Jennifer Kabaker	Mike Miles	Veronica Conforme
Christie Huck	Jenny Curtin	Monica Martinez	Vic Vuchic
Christina Heitz	Jessic Lindl	Mora Segal	Virgel Hammond
Christine Fowler-Mack	Jessica Tsang	Nancy Chou	Vriti Saraf
Daren Dickson	Joaquin Tamayo	Nichole Pinkard	Yusuf Ahmad
Derrell Bradford	Joel Rose	Paul Reville	
Desmond Blackburn	John Bailey	Pauline McPeake	
Devin Vodicka	Jon Deane	Prasan Ram	

The Levers That Will Build a New Paradigm

The What	
Overview	Previously called "content," the what is modernized, narrowed knowledge, in combination with competencies for success in life, the future of work, and in creating healthy, diverse communities and democracy, as well as collective problem-solving for the greater good.
Modernized Content with Mastery-Based Progressions	Modernizing content knowledge means acknowledging that today's students will use technology (toquickly look up facts and figures, do computations and analyze data, etc.) therefore the content they needto learn can be narrowed to what is relevant and updated to build the skills needed to navigate and takefull advantage of technology. Students can then be supported to achieve mastery of knowledge/skills witheach learner taking the time needed to demonstrate mastery to a rigorous level.
Focus on Science of Learning and Development (SoLD)	The science of learning and development shows that learning is rooted in and affected by context: a safe physical place, care and respect from adults, a healthy sense of identity and belonging and mental health. Relationships, emotional engagement, relevance, skills in executive functioning and feelings of motivation are essential prerequisites to learning.
Competencies for the Future of Work	The acceleration of AI has made clear that the future of work will be grounded in both "durable" human skills and technical skills. While technical skills need to be updated frequently, the competencies that make us human - creativity, the ability to work in diverse teams, complex problem solving, judgment embedded in values, critical thinking across multiple domains to discern a course of action, ethics and care for others -are important competencies for success in life, future careers, and to sustain democracy and the planet.
Inspire Collective Problem Solving	In order to sustain humankind and to address the collective problems we face - pandemics, climate disasters and the rise of authoritarianism - we must strive toward the explicit goal of inspiring young people to become ethical problem solvers for the common good, providing learning experiences in civics, in diverse communities and community service. We must provide ways to cultivate mindsets that seek to contribute to a greater good beyond one's own individual career.
Metacognition and Learning to Learn	Developing metacognition - or the ability to step back and reflect on one's own learning and development process - sometimes referred to as "learning to learn" is critical because it is a precursor to wisdom, maturity, and the ability to become a lifelong learner.

The Levers That Will Build a New Paradigm

ENABLING ECOSYSTEM AND INFRASTRUCTURE	
Overview	The elements that need to emerge for a new paradigm to be scaled and sustained.
Ecosystem Development	Education is embedded in communities and political systems so shifting to a new paradigm will necessitate a change to the entire ecosystem. This involves a mindset shift to think of learning as the purview of a new, organic, relationship-based ecosystem - beyond "schools" or "districts" to include families, communities, employers, career and higher education pathways, among others. This will require cultivators who cross silos and make connections to support evolution across the ecosystem.
Focus on Science of Learning and Development (SoLD)	A learning ecosystem that embraces competencies and learning beyond classrooms will need significant new infrastructure of all types - from safe, flexible, on-demand transportation for learning in and out of classrooms, to new learning management tools that track credits across many locations and institutions. The new ecosystem will need to proactively address the question of what public-purpose utilities are needed, and strategically enable their development and governance in a world dominated by private actors. The new infrastructure may not sit in the public sector, but it should not sit entirely in the private sector either, given perverse incentives. A robust infrastructure for the new paradigm needs philanthropic, cross-sector investment and oversight.
Thought Leadership, Policy Innovation (including funding), R&D, and Leadership Development	Ideas and leadership matter - never more so than in a paradigmatic change. The power of visionaries, thought leaders, policy designers, and R&D talent will need to fuel and build the new system, to help us to see the potential of what it could be. We need policy innovators, thought leaders and non traditional leaders to help us see what is possible and how to get there. Leaders, ideas, and solutions must come simultaneously from the bottom up and the top down, requiring adroit facilitative leadership and an investment in collaborative problem solving and learning.
Intermediaries, Coalitions, and Change Management Capacity	In times of turbulent change, we need to attend to the change process itself. "Complex adaptive coalitions" will be needed across domains, silos, race, ideology, geography, and generations. We will need intermediaries who can connect technology systems and human systems, connecting funders with policy leaders, designers, visionaries and thought leaders on the one hand and practitioners, communities, families and learners on the other. Change is hard. We will need a robust effort to support change management and capacity building so learners and educators can migrate from old habits to new.

The Levers That Will Build a New Paradigm

The HOW

Overview	Sometimes called "pedagogy" or "teaching and learning" the how of learning involves the act of and tools for instruction, efforts to measure and credit progress, ways of organizing time and place and defining learner and educator roles.
Student Agency and Personalization	Core to student motivation is a sense of agency, and the ability to make choices to personalize and make relevant the learning process. The new system needs to be designed around agency as the core tenet. For learners to simultaneously master modernized content, SEL and competencies, they need to be motivated and activated, and to accomplish that, learners need to feel ownership and have the ability to personalize learning, just as they have grown accustomed to personalizing most other aspects of their lives.
Active, Community-Engaged and Embedded Learning	At its simplest, active learning means not sitting still in chairs in rows. Active, embedded learning is basedon learners' needs and includes a wide array of pedagogies: project-based and problem-based learning(PBL), socratic dialogue/ seminars, personalized online learning, community-embedded expeditions,internships, simulations, passion-driven inquiries or quests. It is important to design active learning in thegeographic place, within the local community of learners, and in groups of learners making up a learningcommunity so that learning is grounded in place as well as in a set of relationships.
Thought Leadership, Policy Innovation (including funding), R&D, and Leadership Development	In order to manage learning at scale, we need to design in coherence to organize logistics and support systems around pedagogies and content - the other parts of the "how" of the system. The enterprise of learning - which traditionally happens in schools, is increasingly getting unbundled. Without a "design" to provide coherence, the logistics, educator roles, use of time, can become unorganized. There must be a curated model so that learners, families and educators do not have to manage the complexity of an unbundled system on their own and can trust that there are consistent elements in place.
Intermediaries, Coalitions, and Change Management Capacity	Parents and families are core educators in children's lives and need to be embraced and enabled to have agency over their students' learning. And because most K-12 students are minors, the new system must incorporate parent involvement to enable both student agency and multiple effective pathways for learning.

The Levers That Will Build a New Paradigm

The HOW

Accountability

Any learning system supported by taxpayers needs some level of accountability. In the new, paradigm,accountability may mirror private schools' accountability: a foundational level of safety and quality, andthe option for students and families to "vote with their feet" and leave if they are not satisfied. At the sametime, enabling agency and more unbundled choices must include guardrails to uphold equity and ensureprotections for students who are systemically marginalized. There is much work to be done to redefineaccountability for the new system.

Measuring Progress: Assessing and Credentialing

A system combining mastery-based learning with competencies and modernized content knowledge credited for learning in and outside of the classroom will require a significant re-engineering of the "assessing" and "crediting" process. A new ecosystem must provide new approaches (badges, micro credentialing, etc.) and the quality arbiters that can provide the "good housekeeping seal of approval" for specific learning badges or credentials so that badges represent credible mastery, and trusted mastery can be demonstrated. Tools are also being developed to allow us to embed assessments into the act of learning to enable assessment for learning as well as assessment of learning. The use of stealth assessments like simulations and games, can allow real-time, seamless progress measurement.