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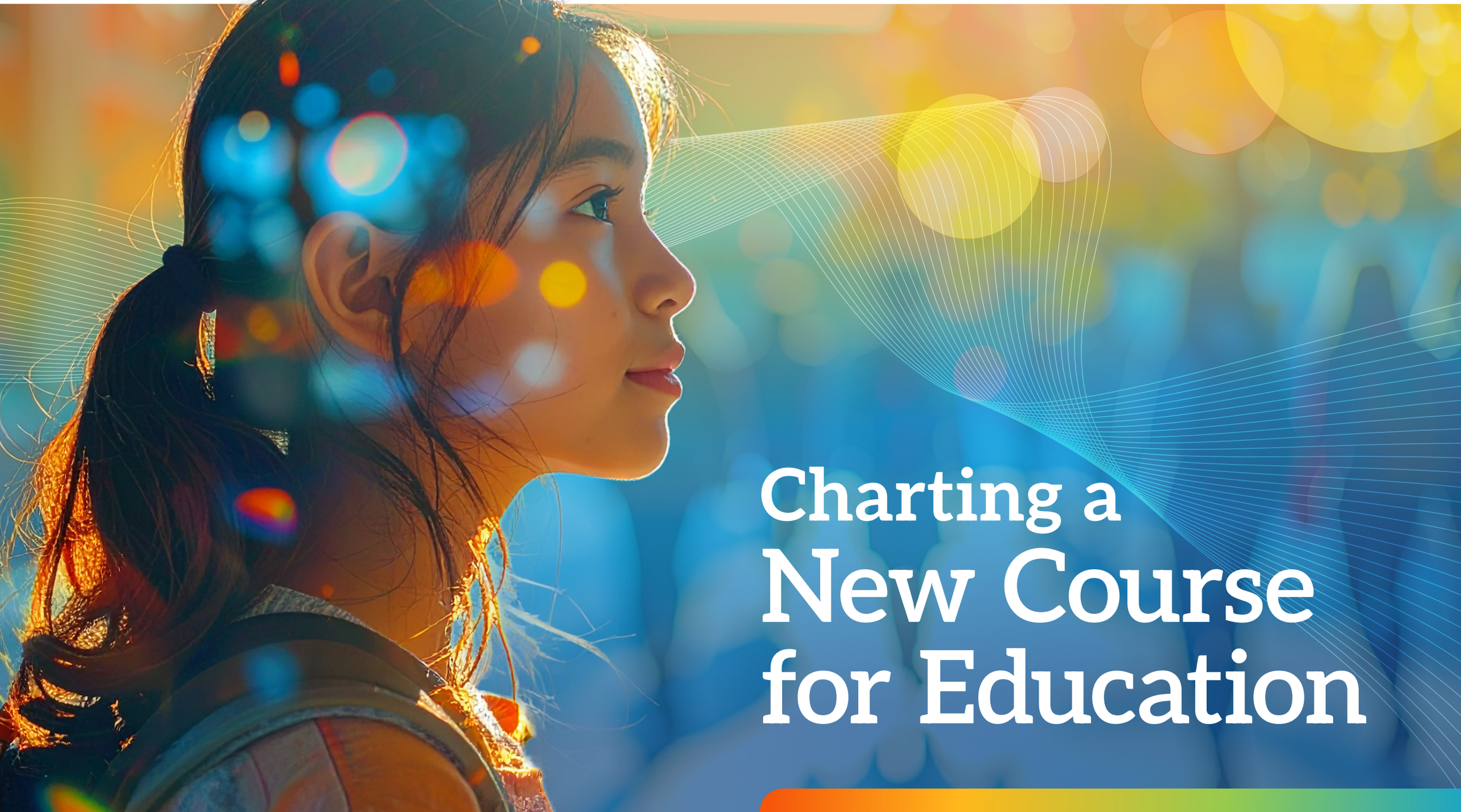


Charting a New Course for Education

Everyone can influence the future, even though no one can control it.

At this time, the future of K-12 education in the U.S. is especially uncertain. Though that uncertainty may be daunting, within it lies powerful opportunities to create meaningful change.

The Challenge Is the Opportunity

Having functional education systems requires, among other things, a stable social, economic, legal and political order that values and protects their existence. It also requires a skilled workforce, comprehensible and controllable technology, enough energy and water and a hospitable climate. None of these conditions is guaranteed over the next decade; in some cases, they are being actively undermined.

When faced with that reality, everyone has a choice. They can be surprised by the future and react to what happens, or they can consider the possibilities that the future holds – the ones they hope to see and those they do not – and decide how they want to prepare and act.

This forecast aims to help its readers do just that. It outlines changes that seem likely to shape K-12 education over the next decade, describes possibilities for how those changes might unfold and offers education leaders and changemakers strategic considerations to weigh as they chart their own paths forward into an unknown future. The challenge of immense uncertainty brings fresh opportunities to shape what happens next.

The Time Is Now

If ever there were a time to create systems that prioritize learners' humanity, joy, academic and human development and ability to determine their own paths, that time is now. If ever there were a time to abandon the structures that fail to serve every learner, family and community, that time is now. If ever there were a time for young people, education leaders, teachers and community members to realize their power and spheres of influence and work together to realize bold visions for learning, that time is now.

Creating change in this era of immense uncertainty requires courage. It also invites leadership. Equipped with a sense of what the future might hold and a commitment to creating education systems that truly meet the needs of learners, society and the planet, people can identify and traverse paths toward it, together.

About This Forecast

This forecast on the future of K-12 education in the U.S. was created by KnowledgeWorks' team of professional futurists using strategic foresight methods. While rigorous, strategic foresight is also a partly subjective discipline; thus, KnowledgeWorks engaged a diverse cohort of futurists, educators, education changemakers, youth and community members to share their perspectives and experiences during this forecast's research and writing.

Because the unknown future is too vast to describe in full and no data about the future exists, no forecast is exhaustive. Rather, this publication raises ideas, issues, possibilities and questions. Because facing or pursuing large-scale change requires changing underlying systemic structures, this forecast explores change and strategic considerations primarily at the system level instead of at the classroom level. This forecast assumes that everyone has a role to play in creating the future. Therefore, its content is intended for education leaders and changemakers, teachers, young people and any other constituent who aspires to shape the future of learning.

How to Navigate This Forecast

CURRENT CONTEXT

Why Today Feels Different from the Past
Understand the current context that is setting the foundation for the future of K-12 education.

DRIVERS OF CHANGE

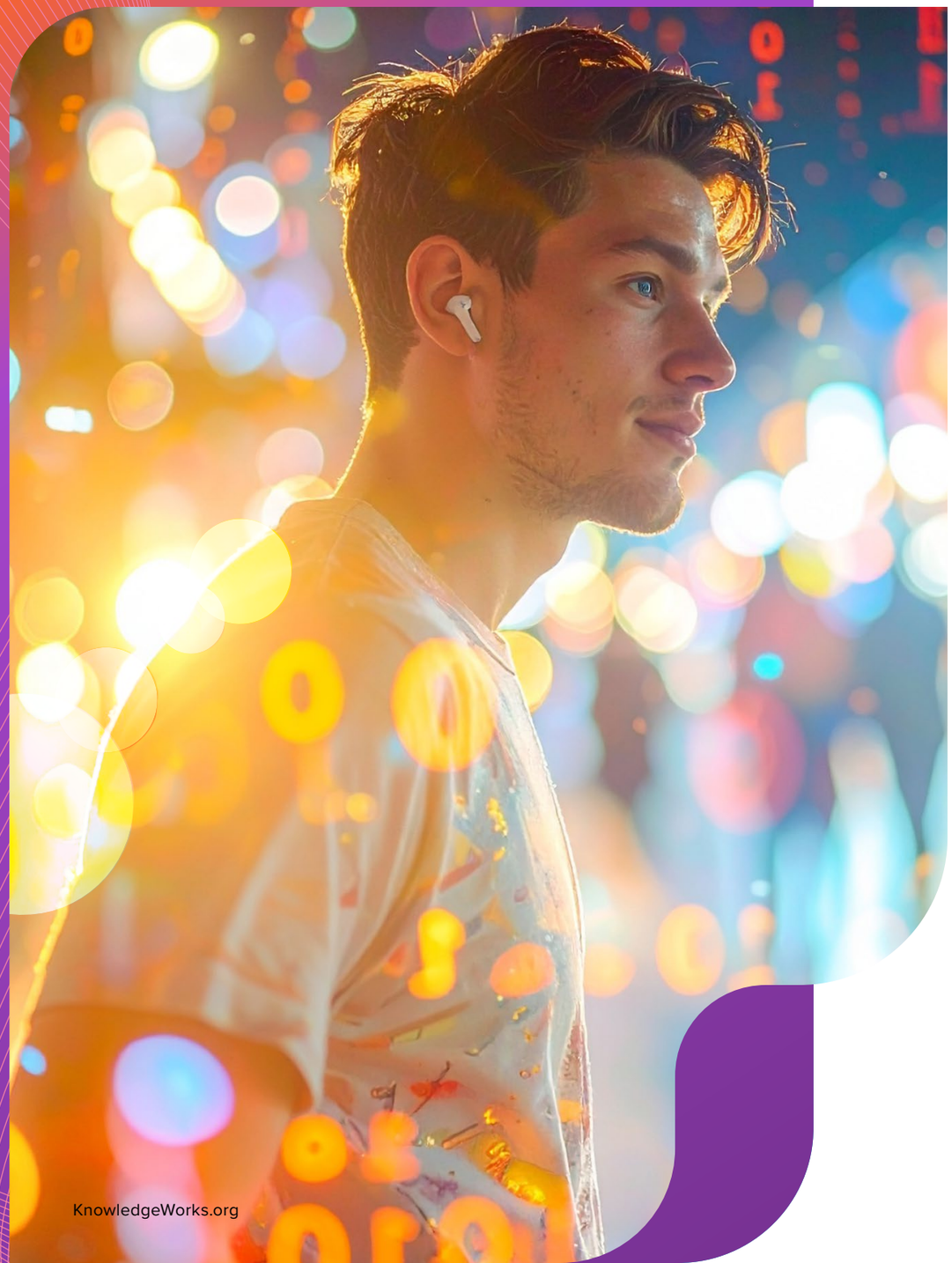
What Is Pushing Us Forward
Recognize drivers of change that could have a major impact on teaching and learning over the next decade.

PROVOCATIONS

Where We Might End Up
Imagine possibilities for the future of learning, including hopeful and challenging ideas about what might exist.

STRATEGIC CONSIDERATIONS

How We Can Move Forward
Reflect on strategic considerations for leading in an era of immense uncertainty.



Current Context

Why Today Feels Different from the Past

Before **looking ahead** at the drivers of change that have the potential to reshape K-12 education over the next decade, we must **look around** at the broad changes in society that are creating our current experiences and serving as the launchpad for the future.

Climate Crisis

We are living through an inescapable climate crisis. Climate disasters are becoming increasingly frequent. Large storms, wildfires and floods have wreaked havoc on communities across the country, including some places that had previously been considered relatively safe from the effects of climate change. The intensity and trajectory of extreme weather events are getting harder to anticipate. In addition, patterns of temperature and precipitation have been steadily changing, threatening natural ecosystems, community livability and human health and well-being. Over the next ten years, school routines, housing, food systems, public health efforts to prevent emergent disease, migration patterns and many more aspects of life will need to adjust to new climate realities.

Artificial Intelligence

Generative artificial intelligence (AI), which can create code and written, video, image and audio content in response to prompts that use everyday language, became broadly accessible with the release of ChatGPT. Generative AI is on pace to become as widespread as the internet. AI is also continuing to evolve. Near term, AI is expected to expand from being an "oracle," a tool of which users ask questions, to also being an "agent," a tool that can carry out tasks on its own. Today's simple question-and-answer interactions are on track to become a more complex set of relationships between humans and AI and among AI systems themselves. Longer term, many people believe that artificial general intelligence (AGI) will develop, matching or surpassing human cognitive abilities. Over the next ten years, AI presents immense potential to create fundamental changes – for better or worse – in education, the workforce and human cognition and behavior.

Social Fragmentation

The decline of communal life, an epidemic of loneliness and ongoing political polarization are contributing to a sense of division and lack of connection among people in the U.S. Many people inhabit algorithmically reinforced, siloed communication bubbles that confirm their existing views and those echo chambers are driving their beliefs and life choices. Neighborhoods are increasingly segregated along socioeconomic, racial and partisan lines, influencing the degrees to which people live, work and learn among people different from themselves. These phenomena are threatening people's ability to connect across lines of difference and work together toward a shared future. Over the next ten years, the ongoing struggle to find common ground and accept shared truth will influence education, community life and efforts to shape social institutions.

Drivers of Change

What Is Pushing Us Forward

Looking into the future of learning can be daunting because it is vast, messy and rapidly changing. These four drivers of change help focus attention on **the most pressing and relevant trends, patterns, plans and developments that are likely to affect K-12 education** over the next decade. They build upon and integrate the broad societal changes named in "Current Context: Why Today Feels Different from the Past."

The next few pages describe these drivers of change in more detail and raise sensemaking questions about their impacts on the future of learning.

Integrating with AI

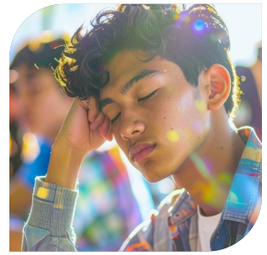
Next-generation artificial intelligence will change how humans think and feel, challenging current notions of skill development and human relationships and requiring new approaches to teaching and assessment.

Everyday Disruptions

A wide range of small- to large-scale disruptions will upend daily life in school and other learning environments and render conventional approaches to educational management and changemaking insufficient to meet emerging needs.

Eroding Public Institutions

As public institutions struggle with declining confidence, economic constraints and expanding market-based competition, public education systems will need to redefine the ways they serve learners and communities.



The Relevance Gap

As young people's realities grow further and further removed from the world of school, education systems face an urgent need to integrate students' emerging needs, concerns and aspirations into learning.

Integrating with AI

Next-generation artificial intelligence will change how humans think and feel, challenging current notions of skill development and human relationships and requiring new approaches to teaching and assessment.

This Driver of Change Today...

Artificial intelligence is already embedded in daily life in seen and unseen ways. Broad access to a range of AI tools is increasing, and those tools are rapidly being integrated into jobs of all kinds. Schools and districts are exploring AI-enabled applications to augment or create efficiencies in today's education systems, including adaptive learning platforms; AI tutors; and tools that enable teachers, administrators and learners to offload tasks. However, using AI in educational settings presents challenges, such as the ethics of using AI for certain functions, bias in AI training data, data privacy, the potential for human disconnection, environmental impacts and cheating.

...And Over the Next Decade

By 2035, artificial general intelligence (AGI) is expected to exist. It could surpass human intelligence and become ubiquitous, undetectable and transformative. As next-generation AI augments and automates different aspects of human experience, approaches to teaching, learning and student support will need to shift accordingly. The impact of AI on cognitive development in the K-12 context remains unknown, as do the specific knowledge and skills that will be most necessary to prepare learners to thrive as adults in an AI-infused world. However, as AI gets more powerful over the next ten years, it will change what it means to acquire and develop skills, challenging traditional notions of mastery and continuing to reshape work.

Even more fundamentally, AI interfaces known as "affective AI" increasingly have the potential to sense the moods and emotions of their human partners, empathize with them and respond accordingly. The next iteration of this type of AI would tailor responses based on nonverbal cues and biometric information that indicated users' emotional states. This development could lead to a wide range of possibilities, from learning experiences that were adjusted based on students' interests or feelings to the emotional manipulation of young people to threats to secure human attachment.

Over the next decade, students' increasing use of AI as a thought partner and social-emotional companion will require schools' community- and culture-building approaches, classroom practices and assessment systems to adapt. As young people increasingly use AI-enabled tools, the boundaries between their own cognition and agency and AI's processing may blur. Education systems will need to consider what outcomes, curricula and approaches to prioritize in a world of thinking, feeling and working with AI.

Key Questions

- How might education constituents critically examine the ways in which AI tools do and do not align with their values and aspirations for learners and establish boundaries where necessary?
- How might educators support learners' social-emotional health in learning environments that include affective AI?
- How might educators use AI to help ensure equitable learning outcomes and support deep and meaningful learning experiences that connect students to their passions and interests?

Everyday Disruptions

A wide range of small- to large-scale disruptions will upend daily life in school and other learning environments and render conventional approaches to educational management and changemaking insufficient to meet emerging needs.

This Driver of Change Today...

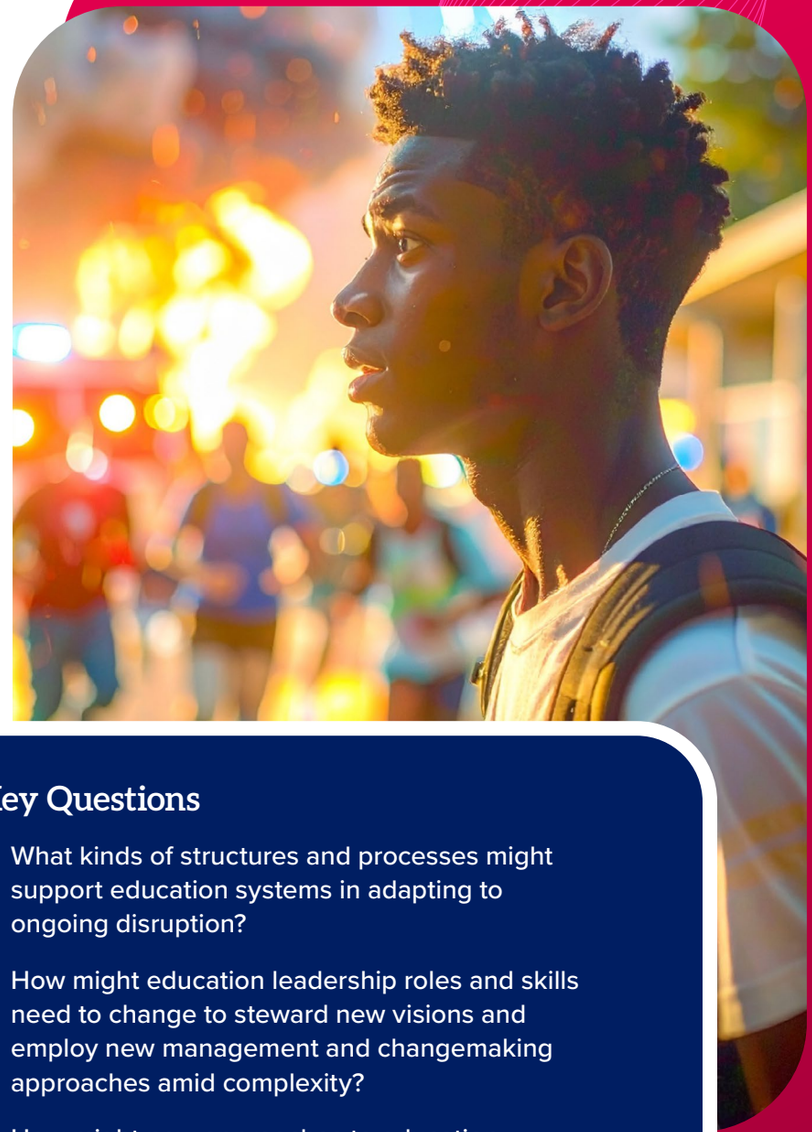
Ongoing destabilization and micro-level disruptions are threatening schools' ability to carry out regular operations and could change the paradigms of education management and changemaking. Already, schools and other learning environments face repeated disruptions such as maintaining utilities during extreme heat, defending student data against cyberattacks, accommodating the needs of students displaced due to storms or emergency migration, keeping up with the rapid advancement of technology, enabling access to consistent learning experiences during virus breakouts and buffering against divisive criticisms about what and how students are taught that spread on social media.

Some disruptions come in the form of large events, while some build slowly over time. In either case, they are straining the limits of everyday learning routines and schedules in ways that are already impacting student learning and threaten to deepen inequities in student outcomes, safety and stability if not addressed. These ever-present challenges are another set of circumstances for an already anxious and burned-out education workforce to navigate. They also threaten students' and families' well-being. Attempts to create stability often focus on the symptoms of the problems without changing the aspects of education systems that are unequipped to respond to such challenges.

...And Over the Next Decade

Education institutions will need to adapt again and again to the rapidly shifting context. They will need to create bold new visions for teaching and learning that are relevant to the emerging future and apply new strategies for realizing those visions. Traditional approaches to education management and changemaking often rely on having answers and applying best practices. In an increasingly complex and interconnected environment characterized by ongoing disruptions, this type of leadership will become more difficult and less effective.

As educators and leaders assess and address changing student and operational needs, they will need to look beyond what worked in another time or place. When seeking to make change in schools and education systems, they and others will need to develop adaptive strategies to help manage ongoing disruptions. Finding ways of anticipating the destructive impacts of disruptions and understanding the new dynamics of change promises to help education leaders and changemakers innovate resilient approaches to education that aim to support every learner.



Key Questions

- What kinds of structures and processes might support education systems in adapting to ongoing disruption?
- How might education leadership roles and skills need to change to steward new visions and employ new management and changemaking approaches amid complexity?
- How might new approaches to education management and changemaking avoid recreating the inequities of past approaches or introducing new ones?

Eroding Public Institutions

As public institutions struggle with declining confidence, economic constraints and expanding market-based competition, public education systems will need to redefine the ways they serve learners and communities.

This Driver of Change Today...

Public institutions are responding to several decades of compounding challenges. Designed in and for a different era, these institutions are guided by often arcane processes and structures that struggle to keep up with emerging needs and challenges in an ever-evolving landscape. In addition, state budgets and tax revenue are unpredictable, and limited funding must be distributed among competing public service priorities, such as supporting public education, ensuring affordable housing, meeting the needs of an aging population, maintaining Medicaid and public transportation and providing public health services in response to climate change. Confidence in U.S. institutions, including public education, has reached an all-time low. Efforts to limit public institutions' power and scope have made them less effective, creating a downward spiral in public trust.

Arguments about privatizing public services continue to play out amid these challenges. Some people claim that privatization plunders public goods, while others claim that it provides greater efficiency and higher-quality services. Often fueled by political partisanship, these competing narratives are raising questions about what constitutes public systems and how to serve public needs effectively.

...And Over the Next Decade

Increasingly, the relevance and survival of public institutions will depend on their ability to develop creative strategies to design, deliver and pay for the services that meet public needs and address shared challenges. Against that backdrop, public education leaders will need to continue to seek ways of providing equitable, inclusive and effective educational services and building trust in their ability to deliver on the promise of public education.

More and more kinds of learning experiences, environments and supports, both public and private, are likely to exist. A diversifying range of funding options, including school vouchers, educational savings accounts and tax credits, could support these offerings. This expanded market of options could lead to a new economy for public education, creating opportunities for new models and raising questions about how best to ensure quality and equity. Approaches to transparency and accountability could be re-negotiated as families' and learners' needs intersect with public and private interests.

Key Questions

- How might a variety of public, private and blended educational models meet public needs, and what might the implications of various models be?
- How might a reimagined economy for public education stimulate or impede a thriving range of learning options and models?
- How might state and local entities maintain equitable K-12 education as a public benefit that is inclusive, meets diverse needs and is financially viable?

The Relevance Gap

As young people's realities grow further and further removed from the world of school, education systems face an urgent need to integrate students' emerging needs, concerns and aspirations into learning.

This Driver of Change Today...

Young people today are feeling optimistic about but unprepared for what is next. Youth mental health is declining, and initial research into the effects of COVID-19 on young children shows concerning social, emotional and behavioral trends. Teenagers and young adults are worried about climate change. They want to make an impact, especially on the issues that matter to them, but the avenues for doing so can feel inaccessible. The tension between young people's desire to forge their own paths and what happens in school is often pronounced.

Though many dedicated educators and leaders work tirelessly to connect with students and address their needs, concerns and aspirations, many students do not find their educational experiences interesting or relevant. As the external landscape changes at an increasingly rapid pace and young people become socially aware at younger ages, the gap between the world of school and the other worlds that students occupy continues to widen. Chronic absenteeism, which is partly caused by boredom and disconnection from school, has been on the rise. In addition, most employers think that high schools could better prepare students for the workforce by placing more emphasis on real-world skills.

...And Over the Next Decade

The consequences of allowing the relevance gap to continue could be dire. Among them, learner and family and caregiver disengagement from and full abandonment of public education could increase.

To counter such consequences and more deeply integrate students' needs, concerns and aspirations, schools and other learning environments will need to shift their practices, policies and underlying beliefs about what education can and must be. They will need to rethink how to structure teaching and learning in ways that prioritize relevance to learners' lives. Education providers will also need to keep seeking effective ways to support young people even as their needs continue to shift. Learners of all ages will need developmentally appropriate ways of engaging with the world that enable them to make their voices heard while also having real support from the adults in their lives who hold more power.

Key Questions

- How might schools and other learning environments best support and care for young people who are facing compounding challenges?
- What key elements of school and other learning environments might need to shift to increase their relevance to young people's current lives and future needs?
- How might young people with a wide range of experiences have a stronger voice in identifying ways to increase the relevance of their learning experiences?

Looking Toward the Future

Together, these four drivers of change make a powerful case for the need to redesign education systems for a changing world. They also present challenges and opportunities that education leaders, changemakers and other constituents will need to consider and navigate as they aim to shape the future of learning.

What changes outlined in this section would have the most impact on your organization's current plans and aspirations, either in a supportive or challenging way?

Where do you see examples of these drivers of change happening in your community or context?

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Provocations

Where We Might End Up

This section presents a variety of future provocations that illustrate how K-12 education might change amid the turbulence of the next decade. These provocations are informed by the broad societal changes outlined in "Current Context: Why Today Feels Different from the Past" and explore potential outcomes and intersections of the four drivers of change identified in "Drivers of Change: What Is Pushing Us Forward."

Provocations are bold ideas that help people consider how the future could be different than today.

Some provocations might seem exciting, while others might seem concerning. All of them can inspire thinking about what the future of K-12 education could look like.

The provocations presented in this section are expressed as "**Imagine**" statements, followed by more specific "**What if?**" questions that help make each future possibility more tangible. They are organized by three areas of K-12 education:

Learning Experiences and Environments

How learning is designed and delivered and where it happens

Learning Providers and Structures

How people, organizations and institutions organize and facilitate learning

Governance and Administration

How decisions are made, resources are managed and school quality is defined and measured

For each area, three signals of change are listed under "**Emerging Changes**." These related present-day programs, practices and initiatives show how changes related to the provocations are beginning to emerge.

Learning Experiences and Environments

How learning is designed and delivered and where it happens

Emerging Changes

River Grove Elementary School

In response to years of close encounters with extreme weather and wildfires, Oregon's Lake Osewego School District opened this school, a 79,000-square-foot facility that can function during prolonged, large-scale power outages resulting from extreme weather and withstand earthquakes.

Assessment for Good

This initiative continuously develops a wide suite of tools – such as assessments and interventions – that honor each learner's unique needs for learning, growth and development and paint a clear picture of how students are experiencing learning.

Khanmigo

This on-demand, AI-powered app aims to help teachers use their time more efficiently by leveraging private student data to create personalized lessons and help learners learn more effectively by engaging them in critical thinking instead of only providing solutions.

Dynamic Learning Flows

Imagine that AI facilitated extreme personalization of learning, tailoring educational content, pacing, approaches, environments and support to meet learners' needs.

What if:

- Educators used AI tools to design unique curricula for individual students, creating an adaptive daily schedule that balanced academics with art, sports, music, community service and other related arts and enrichment activities and introducing feedback loops that sensed frustration and engagement levels and supported mental health breaks?
- Learning modules and assessments automatically adjusted to the needs of students with disabilities, augmenting the personalized supports provided by educators?
- AI bots acted as peer coaches during group work, nudging learners toward their goals, contributing as peers when needed and analyzing the group's progress?
- Learners used AI-enabled wearable devices to create personal digital layers on top of physical reality that helped learners regulate emotions, engage in positive behaviors and focus on their goals?
- There were no set bell schedules, and instead, AI helped students build social capital by dynamically matching them with others who shared a learning goal, selecting a teacher and designating an available classroom and timeslot?

Design for Disruption

Imagine that adapting to climate change and other instabilities became a core design principle for schools and other learning organizations.

What if:

- Year-round schooling emerged, punctuated by spontaneous breaks in the face of extreme weather or climate disasters, and classes paused midday, allowing students to take breaks during scorching afternoons?
- Schools and other learning providers had to pass a “climate readiness design” certification to be allowed to operate, with some completing an optional “regenerative design” component focused on healing the environment?
- Community organizations and businesses met district criteria to become approved learning centers during climate-related and other emergencies in return for tax breaks?
- To nurture educator health and resilience, state education agencies used AI analytic tools to scan for areas with high rates of teacher burnout and other health challenges, designing options for intervention and prevention?
- AI-powered content curation tools blended modern scientific knowledge with Indigenous wisdom and experience, helping to make those insights accessible to people looking to deepen their learning around climate, sustainability and well-being and preserving ancestral knowledge?

Assessment Alternatives

Imagine that a broad range of assessments, some leveraging AI and some not, supported diverse learning environments and experiences, offered learners choice and revealed new windows into learning.

What if:

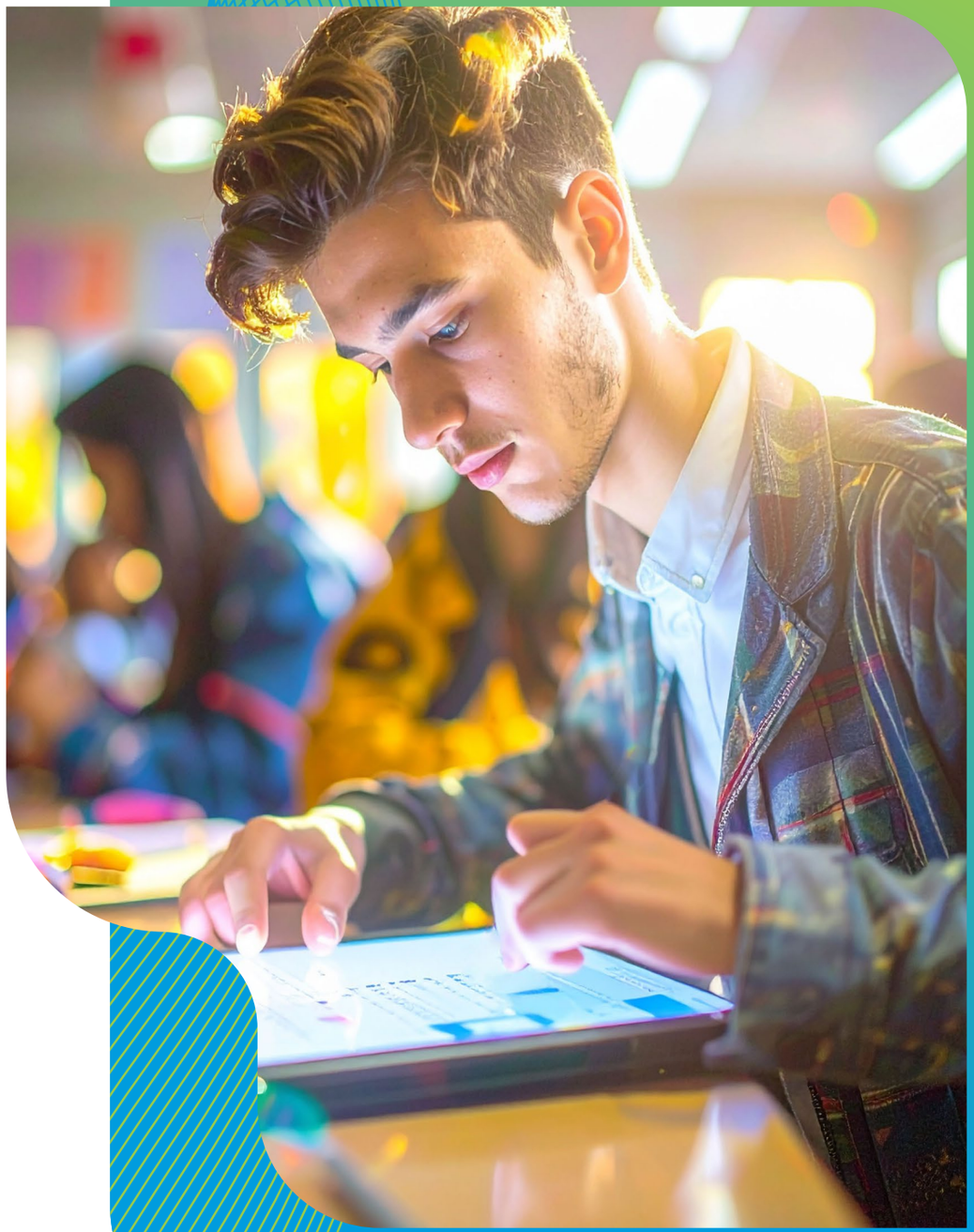
» Learners taught and provided feedback to AI avatars to demonstrate competencies?

» As a learner chose different types of assessments, AI-powered analytic tools recognized patterns across them to provide an extremely accurate picture of how the young person learned and demonstrated mastery?

» A study across assessments revealed widespread cognitive atrophy associated with AI-supported learning, prompting regular student testing for AI dependency and attachment disorders?

» Mastery were redefined to include how a student had partnered with AI to acquire and apply knowledge, ask new questions and develop their social-emotional resilience?

» Some schools doubled down on highly relational, formative, competency-based assessments by providing students with many low-stakes opportunities to learn how to give and receive robust feedback?



Learning Providers and Structures

How people, organizations and institutions organize and facilitate learning

Emerging Changes

The Southwest Colorado Education Collaborative

Nine school districts in rural Colorado banded together to provide learners with opportunities to take their learning beyond the traditional classroom and into nature in partnership with higher education and business leaders.

Broward County Schools

In southern Florida, learners' families and caregivers are using education savings accounts (ESAs) to manage public funds that help them afford multiple but restricted learning options such as private-school tuitions and fees, online programs and tutoring.

Bezos Academy

Amazon founder Jeff Bezos has begun to invest in Montessori-inspired, tuition-free preschools by brokering leasing agreements with existing local organizations that already provide services to families in under-resourced communities.

Many Providers, Fluid Options

Imagine that learners, along with their families and caregivers, had the agency and financial support to access a wide range of educational offerings from diverse public and private providers.

What if:

- Every learner assembled their own personalized education system by mixing and combining learning modules from various providers?
- Publicly funded learning advisors helped families and caregivers create coherence in a fragmented educational market by vetting learning offerings and providers and advising them on which options best met their needs?
- Universal learning passports enabled students to earn and transfer credits across public schools, private learning options and extracurricular programs, including international offerings?
- Corporations such as Amazon, Starbucks and Walmart created new learning districts in partnership with public entities?
- Some public school districts earned revenue by becoming educational intermediaries that managed transactions between learning providers and families and caregivers?

Modular Public Education

Imagine that public school districts gave learners and their families and caregivers the chance to configure their own personalized public education systems from among many public options.

What if:

- Public school districts bundled learning experiences offered by their and neighboring districts' teachers, as well as clubs and other enrichment activities, into thematic packages for learners?
- AI scanned and analyzed all the learning modules available from a public school district and suggested customized combinations and sequences to ensure that each learner progressed according to their needs while avoiding repetition?
- Districts used AI to vet and onboard partners from other sectors to give learners access to a wide range of experiences while ensuring safety and compliance and recognizing students' learning?
- School districts facilitated innovation by incubating and funding public educational startups and mentoring their teachers on entrepreneurship?
- "Grow Your Own" teacher recruitment programs paired local teacher candidates with district-trained AGIs that acted as co-teachers and mentors, preparing candidates to support the district's approaches to education and certifying them once all requirements had been met?

Minimally Viable Public Education

Imagine that, due to resource constraints, public schools offered streamlined, basic education, with minimal financial and administrative support from diminished central district offices.

What if:

- State education agencies provided access to adaptive learning modules and AGI teachers to fill gaps in education offerings and address teacher shortages?
- Corporations widely used skills-based hiring, locating training offices in districts to plan and direct school-based career readiness training programs with clear pathways to employment?
- Disengaged youth rejected public education systems and focused on self-teaching and peer-to-peer learning as they sought learning that was relevant to the changing world?
- Predatory mega-learning enterprises acquired schools and educational programs in vulnerable school districts, consolidating available choices?
- An educator corps deployed AGI educators to locations compromised by climate or economic setbacks?

Governance and Administration

How decisions are made, resources are managed and school quality is defined and measured

Emerging Changes

Remake Learning Council

Remake Learning Council offers guidance and governance to a network of leaders and changemakers across sectors in the greater Pittsburgh region in collaborating as a committed learning ecosystem – in which power is shared – to reimagine learning for their community.

Taxpayer-Funded Private Schools

The state of Ohio is giving millions of taxpayer dollars to private religious schools to fund renovations and expansions, muddying the boundaries of authority and support across public and private systems.

AI Use Cases

Governments at the municipal level are using AI in various ways to organize more sustainable and responsive communities, demonstrating the potential for widespread automation within governance.

Radical Power Sharing

Imagine education governance approaches that invited power sharing across many groups and aligned many learning providers and offerings.

What if:

» School boards leveraged AI to make decision-making more transparent and inclusive, providing multiple options for people to participate and encouraging multi-generational, community-wide stewardship?

» Private donations were banned from school board elections and replaced with a pool of public funding that provided the same amount to each candidate?

» States facing similar climate challenges organized to create a regional set of graduation requirements that helped learners stay on track even as they migrated among communities because of extreme weather?

» State education agencies employed AI ethicists to certify the ethical use of AI by schools and other learning providers?

» Parent activists countered decisions that undermined diversity, equity and inclusion efforts in their public school district by starting a large-scale movement that threatened to leave the schools en masse?

Ambiguous Authority

Imagine that decreasing regulation and support for public institutions sparked a renegotiation of authority over how to best fund schools and define and measure school quality.

What if:

» Local control increased, with individual schools developing and implementing their own quality measures and minimum graduation requirements and taking on many former responsibilities of state education agencies and school districts?

» As federal government retreated from K-12 public education, educational options stagnated in places with unclear policies and inconsistent enforcement processes, causing enrollments to decline and some schools to close?

» Youth and families and caregivers developed their own school quality systems, rating learning providers and experiences, identifying concerns and advocating for change?

» Local disaster response offices assumed educational decision-making responsibilities and influenced operations, funding and even school quality metrics?

» AI-powered models helped de-politicize decision making related to navigating instability by forecasting climate and other disruptions and automatically adjusting school budgets?

Automated Administration

Imagine that AI automated many state- and district-level processes, shifting how decisions were made and expanding the scope of available data.

What if:

- State education agencies and education interest groups used AI agents to bolster equity in learning environments by monitoring resource allocations, student needs and community concerns and automatically filing for and arguing court cases?
- AI-generated metrics surfaced regular, timely data about schools' and districts' sustainability practices, climate change preparedness, physical security measures, mental health resources and levels of community engagement?
- Some schools prohibited the use of AI and other smart technologies, awarding minimally digital diplomas?
- A fully automated school district were managed entirely by a hierarchy of AI agents?
- Teachers' unions accelerated teacher training by developing their own AI agents to certify prospective teachers, drawing on their members' experience to train the AI agents?

Considering Many Ways Forward

There are countless possibilities for how the future of K-12 education might unfold over the next decade, which means that the provocations listed above cannot be exhaustive. However, the provocations in this forecast can help education leaders, changemakers and other constituents widen their perspectives on what could happen, challenge their assumptions, explore unintended consequences and consider what they want for the future.

Which “Imagine” statements and “What if?” questions most caught your attention? What questions, concerns or aspirations do they raise for you?

What signals of change related to these possibilities do you notice in your community?

Strategic Considerations

How We Can Move Forward

The coming decade will be a period of structural transition for education. Education constituents will need to steer it carefully as they adapt to the changing landscape. They will need to manage tensions, mitigate risks and leverage opportunities as they seek to make the future of learning one that truly belongs to everyone.

Many assumptions that have traditionally shaped the organization of public education and its role in society are shifting. Perceptions of the U.S. as a stable democracy and global leader are crumbling. Expectations that the economy will produce jobs that enable many people to maintain a good standard of living are diminishing. The prospects of having sufficient energy, clean water and hospitable climates to support all communities reasonably well are declining. Given the changes on the horizon, education leaders and changemakers must reconsider these basic assumptions as they shape organizational priorities, reconsider critical skills, identify learning goals and develop strategies for providing each young person with meaningful learning experiences.

In this context, the strategic considerations at right represent key areas of focus during the coming structural transition. They are informed by the future possibilities described in "Provocations: Where We Might End Up."

Strategic Considerations

1. **Position Public Education in an Emerging Marketplace**
   Consider how to leverage emerging market dynamics for public good
2. **Facilitate Informed Choice**
   Consider how to help learners navigate the diversifying education marketplace
3. **Address Equity and Access**
   Consider how to ensure equitable and effective funding structures and school quality systems
4. **Cultivate a Network of Networks**
   Consider how to participate in and coordinate dynamic networks
5. **Center Developmental Impacts**
   Consider the impacts of disruptive forces and AI use on young people's development
6. **Develop New Skills and Adaptive Strategy**
   Consider how to engage in ongoing learning and leadership practices that fit the shifting landscape

1 Position Public Education in an Emerging Marketplace

Consider how to leverage emerging market dynamics for public good

Market forces have long influenced what has been taught in K-12 education. Whether wanted or not, they are accelerating. Market forces are shaping the supply and demand of public educational services. Changing funding mechanisms, attitudes toward public institutions and technological advancements are attracting a wide range of new learning providers and making more and more specialized services and educational options available for learners. Furthermore, families and caregivers are embracing new and expanded opportunities to choose the best learning options for their children. Public education leaders and institutions need to learn how to leverage emerging market dynamics to maintain robust public education systems. Specifically, they need to understand families' and caregivers' decision frameworks and patterns of choice. Public education leaders also need to consider how to differentiate their offerings from others' and how to communicate about them effectively.

The coming marketplace of diverse learning services and experiences offered by both public and private providers will look different from one place to the next. Some places might have highly interconnected public and private options, while others could have more siloed options. Some places might rely heavily on virtual, digitally mediated learning. Others might emphasize community-based learning and partnerships with local agencies. Networked micro-schools might proliferate in one place, while more centrally organized learning options might support another.

Public education leaders need to consider themselves to be part of this emerging marketplace. They need to determine new strategies and roles to play to stimulate a vibrant system of public choice that best serves their constituents. While daunting, there is tremendous opportunity for public schools and districts to innovate what it means to provide a public good by leveraging the contributions of both public and private providers and forming deep partnerships with a wide range of sectors. Such innovation could push public education beyond traditional public schools and current funding mechanisms toward a more diversified marketplace of interconnected public education options.

2 Facilitate Informed Choice

Consider how to help learners navigate the diversifying education marketplace

Having an extensive array of educational options will increase the need for learners, along with their families and caregivers, to make informed choices about what options they pursue. Some of those options could exist within public education systems, while some could be offered by other kinds of providers. With the increasing prevalence of market dynamics, education offerings could come and go as demand shifted. In any case, the need to continuously monitor and choose among options could lead to decision fatigue for learners and their families and caregivers.

Given the increasing opportunity for choice, there will be the need for new guidance-oriented specialists and tools to support people in navigating the diversifying education marketplace. These people and tools could help provide coherence across choices and ensure that learners were getting what they needed. Specialists and tools could rate learning options' quality based on a clear set of criteria. They could also identify and recommend learning options that addressed individual learners' needs and aspirations. Such services could be carried out by education professionals within or outside public education systems, as well as by automated AI applications.

Public education leaders will need to figure out where their authority and responsibilities lie in facilitating informed choices for all learners and preventing stratified access to such guidance from deepening existing inequities or introducing new ones.

3 Address Equity and Access

Consider how to ensure equitable and effective funding structures and school quality systems

As education becomes more varied, existing barriers to accessing high-quality educational options could deepen and new equity and access issues could emerge. The provision of education as a public good faces challenges from the fragmentation and diversification of education systems and weakening federal oversight.

Innovations in funding, such as school vouchers and educational savings accounts, often benefit only those with existing resources and knowledge while depriving public education of resources. With public funding flowing directly to families, guardrails and guidance will be necessary to ensure that purchases qualify as learning expenses. As education savings accounts, vouchers and other funding mechanisms gain popularity and the next generation of flexible spending structures unfolds, it will be essential to ensure that they serve all learners and the goals and interests of public education systems.

In addition, states and districts need to consider implementing new assessment and accountability systems to evaluate learning providers and ensure that they offer high-quality services and desirable outcomes for every learner. Future school quality systems must balance autonomy and agency, allowing for reciprocal accountability between schools and communities in support of meaningful innovation.

By advocating for equitable and effective funding structures and school quality systems, education constituents can help ensure that all students, along with their families and caregivers, have the resources and support needed to navigate a complex marketplace of learning opportunities and new kinds of organizational structures, such as networks, that might emerge from it. Education constituents must avoid creating new educational deserts that would further entrench or introduce new opportunity gaps.

4 Cultivate a Network of Networks

Consider how to participate in and coordinate dynamic networks

As market forces and AI expand the number and type of learning providers and specialized learning options proliferate apart from traditional institutions, extensive coordination will be necessary to align educational offerings in ways that drive equitable opportunities for every learner. Education leaders will need to shift from managing a few transactional partnerships to coordinating networks of providers, individuals, institutions and agencies. This is a structural shift from a static hierarchy of organizations and agencies to a dynamic, open network of independent players across the layers of education systems and the diversifying education marketplace. Networks could extend to include a wide range of community agencies and postsecondary institutions, as well as business and industry partners.

Management in this network of networks will require establishing shared goals, brokering commitments and coordinating strategies and actions across network participants in ways that are mutually supportive. Communication across networks will be needed to spread awareness about innovations in key areas such as learning experience design, assessment, technology use and teacher preparation and development and enable participants to build off one another's work.

It will also be necessary to harness and make sense of data flows, resources and financial transactions across diverse providers and organizations. Doing so will create a broad view of what is happening in education. It will help network participants identify synergies and foster effective connections. In this highly networked environment, education organizations and constituents will need to consider what roles they might play and how their contributions might drive positive impacts for every learner.

5 Center Developmental Impacts

Consider the impacts of disruptive forces and AI use on young people's development

The potential for K-12 public education systems to be restructured creates an opportunity to think differently about how to support young people's shifting developmental needs and challenges. Increasing existential concerns affecting children and youth, including the climate crisis, accelerating technology and social fragmentation, could worsen existing mental health issues and have long-term developmental impacts affecting learning and well-being.

K-12 learners are experiencing formative development, with distinct milestones at each stage from early childhood to late adolescence. Over this period, they are building their sense of self, social awareness, independence, resilience and hope for the future. Adults should seek to learn from young people about ways to address the disruptive forces shaping our time. However, young people should not have to shoulder a disproportionate amount of responsibility for solving the problems that those forces are creating.

Specifically, the use of AI to design learning systems, environments and experiences should be approached with a child developmental lens. AI can be used to build social relationships, form attachments and perform cognitive work, but education constituents must weigh the long-term pros and cons of such interactions. For example, when might motivational nudges from an AI become manipulation? How might AI-mediated experiences lead to learning that transfers to building healthy relationships and secure attachments with other people? To what extent might children and youth immersed in AI-enabled learning environments be able to perform complex cognitive work without AI? As education leaders and other constituents create strategies to adapt to educational restructuring in a turbulent decade, they will need to decide how best to integrate AI into learning experiences. In doing so, they must center learners' developmental needs, anticipating AI's short-, mid- and long-term impacts on young people's learning and well-being.

6 Develop New Skills and Adaptive Strategy

Consider how to engage in ongoing learning and leadership practices that fit the shifting landscape

Throughout the next decade, education management and changemaking will require new skills and leadership strategies. Educators will need to develop competencies related to AI and climate change and learn how to employ adaptive strategy.

Current generative AI systems present many opportunities and challenges related to educator practice and student learning. The evolution to more powerful artificial general intelligence (AGI) systems will expand consideration of what young people learn and why, along with how schooling is designed and organized in relation to an AI-driven economy. To leverage the opportunities and minimize the risks of current generative AI, emerging AGI and other forms of AI, all educators must develop a foundational understanding of how AI works and its limitations, including bias and the potential for hallucinations that present false or misleading information as fact. AI literacy also needs to include an understanding of how to use these tools safely, ethically and effectively in educational contexts. In addition, educators and learning providers should be versed in AI ethics to protect learners and their families and safeguard sensitive data. Ongoing learning about AI will be necessary.

To be future-ready, educators will also need to increase their understanding of the impacts of climate change. Education leaders will need to consider its consequences for school infrastructure and design. They will also need to grapple with possible shifts in resource allocation to prevent and mitigate its impacts. In addition, all educators will need to develop an understanding of climate change's ripple effects on public and personal health and wellness.

In the context of these disruptive forces, education leaders and changemakers will need to expand their strategic toolkits to include the mindset and skills of adaptive strategy. That approach promises to help them monitor and sense the changing educational landscape and pivot flexibly to drive meaningful change.

Focusing Attention

These six strategic considerations summarize key takeaways from this forecast. They provide initial guidance on where education leaders, changemakers and other constituents must focus their time and efforts over the next decade to ensure that K-12 education centers learners' needs amid structural transition.

Which of these strategic considerations are already influencing your organization's plans and aspirations? How might content from this forecast support conversations about them?

Which of these strategic considerations have not yet affected your organization's plans and aspirations? Which ones seem most relevant to bring forward?

A Decade of Crucial Choices

The current context and drivers of change explored in this forecast are challenging the long-held assumption that public education systems are inherently resilient and will continue to exist as we know them.

As the provocations highlight, the next decade presents a unique opportunity to transform learning but also presents significant risks. With intentional action, K-12 education in the future could be a strong public good that is personalized, equitable and relevant to the needs and interests of learners. Conversely, public education and other forms of learning could become increasingly commoditized and commodified, representing a narrow group of interests and leading to a fragmented landscape. In some places, public education could even disappear entirely.

Choices made over the next decade will determine which kind of future emerges. Education systems will need to be fundamentally reconceived and designed if they are to serve all learners and communities effectively. Now is the time to build a future where education is a powerful, inclusive force for good.

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