Shaping the Future of Learning:
A Strategy Guide

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KnowledgeWorks®

Shaping the Future of Learning:
A Strategy Guide

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"We can make the future happen now."

—Higher education leader

Executive Summary

The next decade represents a critical window of choice. As explored in KnowledgeWorks' 2015 forecast, *The Future of Learning: Education in an Era of Partners in Code*, exponential advances in digital technologies, new social norms, organizational approaches, and economic models are ushering in new ways of living, working, and learning that could look dramatically different from today's realities.

To help education stakeholders respond to the changing external environment, this paper explores five foundational issues facing education.

Leading the Future of Learning

360 Degree Learners

How can we **educate the whole person** and enable lifelong learning that supports academic and social-emotional growth?

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These issues reflect insights drawn from workshops with leaders and innovators of K-12 school-based education, informal and community-based learning, and higher education. Spotlights on each of these sectors suggest strategies for responding to these foundational issues.

Opportunities for Education Sectors

K-12 School-Based Education: This sector has the opportunity to address unique challenges relating to student needs, equity, regulatory requirements, and funding while building upon its current leadership in personalized learning. For example, K-12 leaders and innovators can use a learner lens to put students at the center, design for equity to avoid unintended consequences, and showcase what learners can do to shift perceptions of what young people are capable of and the impact they can have on their communities.

Informal and Community-Based Learning: This sector's unique offerings of free-choice learning experiences and relative freedom can help lead the way for more personalized and relevant learning for learners of all ages and foster more integrated learning ecosystems. Despite capacity constraints, leaders can, among other strategies, normalize lifelong, life-wide learning; foster community-wide learning ecosystems; and start conversations about goals to help young people define for themselves what success in learning looks like.

Higher Education: Higher education institutions are sources of discovery and new ideas, but their cultures and structures tend to be well established and slow to change. Leaders and innovators can, among other strategies, emulate the gap year to engage learners, find wedges for change before pushing for change at an institution's core, and treat learners as equal stakeholders.

The paper concludes by highlighting cross-sector insights and underscoring the urgency of acting now to shape the future of learning. We invite you to explore guidance from colleagues across education as a starting point for envisioning what you would like the future of learning to look like. **Consider how you might contribute to creating a future of learning that serves all learners and society well.**

Shaping Education for the Era of Partners in Code

The next decade represents a critical window of choice. Exponential advances in digital technologies and new social norms, organizational approaches, and economic models are ushering in new ways of living, working, and learning that could look dramatically different from today's realities. As the pace of change accelerates, education stakeholders need to explore how best to harness emerging trends to create and foster future learning environments and ecosystems that prepare all learners to thrive amid rapid change and increasing complexity.

As explored deeply in KnowledgeWorks' latest comprehensive forecast, *The Future of Learning: Education in the Era of Partners in Code*, our lives will, over the next decade, become so inextricably linked with our digital companions that we will find ourselves living as partners in code, becoming even more reliant on digital technologies for work, learning, and life than we are today. More specifically, the forecast highlights five drivers of change that are opening new opportunities and introducing new challenges for education:

Five Drivers of Change

Optimized Selves – discovering new human horizons

Labor Relations 2.0 – negotiating new machine partnerships

Alternate Economies – finding the right niche

Smart Transactional Models – creating self-managing institutions

Shifting Landscapes – innovating in volatile conditions

These forces of change could present both new opportunities and new challenges for learning even as they also reconfigure the contexts in which learning takes place. Today's systems, institutions, and organizations need to consider how best to respond to a rapidly changing and increasingly complex external environment that will impact their operations, give rise to new organizational structures and business models, and shift learners' expectations.

For Forecast 4.0 and other resources, go to knowledgeworks.org/future-learning.

Acting Now to Realize Tomorrow's Visions

To help education stakeholders respond to opportunities and challenges on the horizon, this paper explores five foundational issues facing education and suggests strategies for responding to them, with spotlights on K-12 school-based education, informal and community-based learning, and higher education. In so doing, it recognizes that the boundaries among these sectors are increasingly fluid but that education stakeholders need to act from their current positions.

The guidance presented here reflects the insights of current leaders and innovators gathered through three workshops that KnowledgeWorks convened during spring 2016. We invite you to step into the future with us and explore how current institutions and organizations might take the lead in defining education for the emerging era of partners in code.

Methodology

In spring 2016, KnowledgeWorks convened three workshops, inviting leaders from K-12 school-based education, informal and community-based learning, and higher education to explore our future forecast and what it might suggest for their organizations and others like them. The groups represented diverse perspectives within each of the three sectors, broadly defined. They included current and former educators, administrators, nonprofit and community-based learning leaders, policy experts, thought leaders, and innovators. (For a full list of participants, see the acknowledgements section of this paper.)

Each workshop followed the same format, which involved:

- Diving deep into the content of KnowledgeWorks' forecast
- Surfacing and analyzing major issues on the horizon
- Identifying top opportunities and challenges
- Prototyping possible solutions
- Clarifying participants' visions for the future of learning
- Considering ways of beginning to shape the future today.

Participants' insights form the basis of the recommendations presented in this paper.

"Ignoring trends shaping the future of education will not stop change from happening. It's important to have a voice in shaping it."

— K-12 leader

Foundational Issues Facing Education

Workshop participants across K-12, higher education and community-based learning organizations surfaced five foundational issues facing education in the era of partners in code. These issues represent critical areas for shaping the future of learning.

360 Degree Learners

How can we **educate the whole person** and enable lifelong learning that supports academic and social-emotional growth?

Today, society generally imagines a "learner" as a young person engaged in academic pursuit. Many workshop participants found this image limiting, especially given the value they placed on lifelong, social-emotional, and interest-based learning. They also worried that emerging technologies, could, if unchecked, reduce personal connections and experiences to limited data points. Their preferred alternative was to enable broad, relationship-based, technology-supported learning experiences that emphasize many aspects of development across every life stage.

The Whole, and the Sum of Its Parts

How can we **personalize learning in community**, reorienting education around learners while strengthening society?

The leaders and innovators whom we convened underscored the need for learners' interests and needs to play a larger role in what is taught and how learning is organized than is common today. However, they also cautioned that placing increasing emphasis on personalized learning could reduce civic responsibility, undermine social connections, and further marginalize certain learners and communities. To strike a balance, they explored what personalized, yet community-oriented, learning pathways might look like.

Elastic Structures

How can we **create flexible approaches to learning and coordination** that respond to learners' needs?

The rigidity of current funding approaches, administrative and governance structures, and policy frameworks surfaced as a barrier to meaningful change at nearly every turn. Nonetheless, a key feature of the era of partners in code is the emergence of new ways to coordinate learning by leveraging emerging technologies in combination with a cultural shift toward transparency, distributed authority, and new organizational structures. To address today's constraints and take advantage of emerging opportunities, workshop participants explored ways of fostering more responsive structures and organizations.

Innovation with Intent

How can we **ground systems change in equity**, including and supporting underserved learners?

Every day, education is called upon to innovate, change, and improve. Still, new is not always better, more equitable, or more supportive of learners. It is all too common for well-intentioned efforts or initially lauded innovations to fall flat or do unintended harm, especially when they do not specifically address the needs of traditionally marginalized learners. Participants surfaced many ways in which the changes on the horizon could exacerbate inequity. Yet they also examined opportunities to create systems of learning that respond to and work well for all learners and address unmet needs. To negotiate that tension, workshop participants looked past the gloss of innovation for its own sake to explore how change could be directed in service of educational equity.

The New A+

How can we **renegotiate definitions of success**, examining what education systems aim to achieve and who gets to say?

It can be tempting to look at the future of education only through the lens of today's aims and assumptions. Yet at some point in each workshop, participants questioned what the fundamental purpose of education might be. They articulated a need for society to reexamine what education systems are meant to achieve and to rethink who is involved in making those decisions. Today, success is most often measured in the form of scores and rankings determined by people far away from learners. Workshop participants called for a reexamination of what we want from education systems and new mechanisms for ensuring that communities have a voice in that discussion.

Addressing These Foundational Issues

The following sector-specific spotlights identify strategies for addressing these foundational issues from the perspectives of K-12 school-based, informal and community-based learning, and higher education. They derive from participants' specific experiences but are designed to be nimble, to spark inspiration, and to apply across many kinds of systems, institutions, and organizations.

As you explore them, keep in mind that every organization has different goals, needs, and available resources. As such, some strategies might seem more appropriate than others, and the tactics that work in service of those strategies will vary. You might also identify additional or different ways of responding to the issues explored here. In any case, we invite you to consider the strategies presented in the spotlights as a starting point for identifying how your sector and organization might respond to the foundational issues facing education in an era of partners in code.

Strategies for K-12 School-Based Education

In responding to the foundational issues facing education in an era of partners in code, leaders and innovators in K-12 school-based education sought to navigate the sector's unique challenges relating to student needs, equity, regulatory requirements, and funding. They also sought to build upon the sector's current leadership in personalized learning to put even greater focus on learners' needs, capabilities, and insights.

360 Degree Learners

How can we **educate the whole person** and enable lifelong learning that supports academic and social-emotional growth?

Use a learner lens. Amid the multitude of education stakeholders and decision-makers, learners' perspectives on what is working and not is often lost. Considering learners' points of view when evaluating potential changes, ideas, and solutions can help education stakeholders better identify truly learner-centered approaches and align institutional priorities and structures.

Prioritize human capital. For educators to support learners in a rapidly changing environment, they need the time and skill to support learners' mental health, social and emotional growth, and personal development. Identifying opportunities to re-tool schedules and responsibilities and using technologies that support and deepen human relationships can help educators focus more fully on educating the whole person.

Get real. Giving learners the opportunity to practice both academic and non-academic skills can allow them to safely develop adaptability and self-confidence. Education leaders can look for opportunities for learners to engage in or simulate real-life experiences, receive feedback, and set goals for themselves. Such exposure can be critical to helping learners form aspirational visions for themselves and take ownership of their learning journeys.

The Whole, and the Sum of Its Parts

How can **we personalize learning in community**, reorienting education around learners while strengthening society?

Connect personal and community interests. High-quality personalized learning accounts not only for a learner's individual needs, interests, and goals, but also for those of the community. By connecting learner-driven factors to larger community needs and exposing learners to challenging ideas beyond what they already know, education can be both personally and publically relevant.

Normalize collaboration. Personalized learning does not mean learning in isolation. Giving learners more access to personalized experiences and also to community partners, learning peers, experts, and a wide variety of educators can help them develop skills and deepen learning. If educators assume that personalized learning is also collaborative learning, new opportunities can emerge.

Recognize learner impact. Having a clear and visible understanding of outcomes can be motivating, yet learners often receive feedback only through grades and test scores. Creating incentives and opportunities to participate in authentic and meaningful work beyond school walls and finding ways to measure its impact can give learners a greater sense of responsibility for the world around them and allow them to interweave their personalized learning journeys with their environments.

Elastic Structures

How can we **create flexible approaches to learning and coordination** that respond to learners' needs?

Pilot new approaches. Large-scale structural or policy changes take time and enormous effort. Educators, schools, and districts can take initial steps toward larger goals by finding manageable, small-scale ways to test ideas within existing systems and school models. Finding opportunities to pursue school- or district-based research and development and maximizing partnerships and community assets can enable current institutions to become their own engines of innovation.

Learn from other sectors. Considering how adjacent or analogous sectors manage change and administer and coordinate their work can illuminate new approaches and raise possibilities for action. Homeschooling, the health care sector, or even the entertainment business can all spark inspiration for K-12 leaders.

Use technology to enable responsive administration. Emerging technologies such as algorithmic management, as well as more established technologies such as online learning networks, can support more responsive systems and structures. Effective use of technology can enable schools and districts to be in contact with families, communities, and experts and to make wiser use of data, bringing valuable voices and feedback loops into administrative processes.

Innovation with Intent

How can we **ground systems change in equity**, including and supporting underserved learners?

Design for equity. Equity is not a given in any educational change effort, and unintended, inequitable consequences can emerge. To help ensure that proposed changes lead to increased equity, education leaders can consider how well those changes might work for traditionally underserved learners, include those learners in decision making, and genuinely engage diverse stakeholders.

Face intimidating shifts. Changes on the horizon can seem daunting. For example, the future of learning might seem complex and even more difficult for learners and families to navigate than today's education systems. Instead of assuming that the K-12 system's relative stability will continue and inoculate current schools and districts from change, leaders can consider future challenges and opportunities in advance and plan for how to enable, mitigate, or adapt to emerging trends. Recognizing challenges in advance can help leaders be proactive in forming solutions that respond to the changing environment.

Ground change in learning science. The era of partners in code and the accelerating rate of change offer K-12 stakeholders unprecedented opportunity to shape the future of learning. As stakeholders explore possible ways forward, it is imperative that potential reforms and innovations be grounded in learning science rather than in political or personal agendas or profit motives. Staying focused on what educators and researchers already know about learning and development can help K-12 leaders sort through these issues.

"Start thinking as if you consumed the learning."

— K-12 leader

The New A+

How can we **renegotiate definitions of success**, examining what education systems aim to achieve and who gets to say?

Align incentives. The outcomes that the K-12 education system is designed to achieve are often misaligned with what learners, families, and educators say they want from education. Collaboratively and clearly identifying what success looks like — apart from official definitions — can help learning communities devise new approaches and align incentives and interventions to their common goals.

Look beyond the next stage. Today's schools are typically considered successful if they have set learners up for the next life stage, sometimes at the expense of considering what is currently relevant and meaningful for learners and what they might need to be prepared for a more distant future. Considering what learners want now and might need for the future can help education leaders broaden definitions of success and prepare learners more fully.

Showcase what learners can do. The broader public often holds a limited view of what young people, especially low-income young people of color, are capable of and what impact they can have on their communities. If learners have more opportunities to share their work, talents, and ideas publicly with the support of educators, that narrative can change. Bringing learners front and center can spur adults to rethink their beliefs about learners' abilities to demonstrate agency in their learning, contribute meaningfully to their communities, and follow their interests.

Shaping the Future of K-12 School-Based Education

Despite the magnitude of current and future challenges, K-12 school based education has significant opportunity to redesign learning ecosystems to be more equitable and learner-centered. These strategies illustrate the potential to channel the changes on the horizon to find fresh solutions to difficult problems and new avenues for realizing exciting visions for learning. They also offer caution in balancing optimism around new approaches with the difficulty of changing the status quo and the risk of unintended consequences. As K-12 school based educators seek to balance such tensions, the relative cohesion of the sector can be an asset in leading sustainable change.

"Simply continuing to put the learner at the center makes the future make sense."

— K-12 leader

Strategies for Informal and Community-Based Learning

In responding to the foundational issues facing education in an era of partners in code, leaders and innovators in informal and community-based learning sought to capitalize on the sector's relative freedom to incorporate new approaches and to support broad definitions of learning. While acknowledging capacity constraints as these organizations begin to play an increasing role in interconnected learning ecosystems, they saw potential for the sector to provide leadership that could also benefit K-12 school-based education.

360 Degree Learners
How can we **educate the whole person** and enable lifelong learning that supports academic and social-emotional growth?

Normalize lifelong, life-wide learning.
Informal and community-based educators work with people from every age group who are pursuing experiences for a host of reasons and in various settings, and they consider all of those people to be learners. Expanding society's typical definition of learners and embracing the full range of when and where learning occurs can illuminate new possibilities for educating the whole person.

Foster social emotional development.
The saying goes, "What gets measured gets done." Emotional intelligence and non-academic skills are difficult to measure, which may be why they are often given relatively low priority in school-based education. Leaders of informal and community-based learning can prioritize building these skills in their own settings and can raise awareness of ways to incorporate them in other learning environments.

Curate learning challenges and pathways.
The informal and community-based learning sector already leads the way in interest-driven learning. It has the opportunity to build upon that leadership by exploring new kinds of learner supports and encouraging pervasive access to interactive, personalized, self-paced, real-time learning. Leaders of this sector can orient the experiences that they offer around challenges, facilitate coherent but customized learning pathways, and create staff roles that focus on helping learners navigate and complete options.

The Whole, and the Sum of Its Parts
How can **we personalize learning in community**, reorienting education around learners while strengthening society?

Foster community-wide learning ecosystems.
Museums, libraries, cultural institutions, and makerspaces are all open, social learning spaces where people pursue their own interests alongside others. By considering more extensive interconnections with K-12 and higher education, leaders of informal and community-based learning can begin to visualize what community-based, personalized learning ecosystems might look like and find new opportunities to knit together current systems and organizations while helping people move freely across them.

Engage a matchmaker. Finding appropriate community-based learning opportunities can be a challenge, but tools that use data and algorithms to connect learners with experiences promise to simplify the search process. Leaders of informal and community-based learning can build networks with other organizations and can use technologies such as matchmaking platforms to help learners connect with the right place-based experiences and build linkages among them.

Broaden the focus of personalized learning.
Conversations about personalized learning often focus on school-based education. Yet people of all ages could benefit from personalized learning that goes beyond traditional academics to meet a wide range of needs. Because the informal and community-based learning sector already offers a wide range of experiences and tailors them to meet demand, leaders can foster conversations about broadening the focus of personalized learning and experiment with how it might manifest.

Elastic Structures

How can we **create flexible approaches to learning and coordination** that respond to learners' needs?

Identify as an educator. A crucial step in the inclusion of informal and community-based learning in the larger learning ecosystem is to identify the sector's learning agents as educators. Learning that happens outside of a school building often goes unacknowledged. Though informal and community-based learning institutions face many hurdles to receiving official and popular recognition of their important contributions to education, the first step might be for the sector's leaders to own their place in the space.

Rethink infrastructure. Most education organizations and sectors operate in silos and are not connected in ways that allow learners to move freely among them or encourage leaders to learn from one another. Yet some communities and organizations are beginning to create learning ecosystems that span traditional boundaries. Leaders of informal and community-based learning can build upon such efforts to consider the potential for new forms of infrastructure, such as networked learning hubs or digitally mediated learning exchanges, to create new opportunities for supporting learning beyond today's organizational and systemic boundaries.

Advocate for new funding streams. Despite their many contributions to learners, informal and community-based learning often does not receive dedicated education funding. To help extend the sector's impact and contribute more centrally to lifelong learning ecosystems, leaders can advocate for new funding streams that expand access to public funds and support lifelong learning and for creating more flexibility within existing funding streams. They can also advocate for evaluation metrics that align with desired practices. Even modest changes could incentivize system-wide changes and increase access to free-choice learning.

Innovation with Intent

How can we **ground systems change in equity**, including and supporting underserved learners?

Practice inclusive design. While many informal and community-based learning organizations already take pains to engage diverse audiences and share authority, new approaches need to be even more inclusive. Leaders of informal and community-based learning have an opportunity to do more focused work with communities around disparities and to encourage grassroots decision making. Being intentional about recruiting learners and community members to be part of experience design can help avoid bias and inequity and can connect organizational decision-makers with communities.

Build easy on-ramps. A vibrant learning ecosystem that connects learners with opportunities beyond school walls and across their lifetimes can sound difficult to navigate. As informal and community-based learning expands its offerings and builds new networks and connections with other learning organizations, designing accessible ways for learners to find and take part in those offerings and networks will help ensure that everyone has the opportunity to participate

Model relevance. Shepherding change in education is often treated as the responsibility of K-12 teachers and administrators, but the gravity of change on the horizon requires a broader base of change agents and could lead to new learning structures. As education institutions and educators adapt to new realities, leaders of informal and community-based learning can share their own practices for creating interest-driven learning experiences and their ways of staying relevant to learners.

The New A+

How can we **renegotiate definitions of success**, examining what education systems aim to achieve and who gets to say?

Start conversations about goals. Informal and community-based learning has a unique opportunity to help learners develop their own definitions of success. With relatively little pressure to cover content and reach defined metrics, informal and community-based educators can engage the people they serve in conversations about what they hope to achieve and contribute and can lead the effort to broaden society's and school-based education's view of success.

Expand credentialing. An abundance of learning takes place throughout communities, yet many learners never receive credit for it, and many organizations do not receive sufficient recognition for providing it. Leaders of informal and community-based learning can be at the forefront of the conversation of how to measure, verify, and credential learning that takes place outside of classrooms and at different times of life. They can consider how their data infrastructures enable the collection and sharing of data that is for learners, not simply about learners.

Advocate for local solutions. Each learner and community is different in myriad ways, yet people often consider education efforts successful only if they are able to scale. The value of local, tailored, and community-oriented organizations, services, and ideas cannot be overstated. Leaders of informal and community-based learning can help change that mindset by valuing their own contributions to the local learning landscape and advocating for the importance of local solutions.

Shaping the Future of Informal and Community-Based Education

The potential for the informal and community-based learning sector to shape the future of learning is often overlooked by the larger learning landscape and even sometimes by those who lead it. Yet the sector's unique focus on free-choice and interest-driven learning, as well as the sector's relative freedom, can help lead the way for more personalized and relevant learning for learners of all ages. The sector can also help broaden others' understanding of when and where learning occurs, leading the way toward fostering more integrated learning ecosystems, more flexible learning infrastructure, and increased learner agency.

"The cultural shifts feel inevitable — will policy shifts keep up?"

— Community-based learning leader

Strategies for Higher Education

In responding to the foundational issues facing education in an era of partners in code, leaders and innovators in higher education raised far-reaching questions about the purpose and outcomes of higher education. They also explored possibilities for broadening and diversifying learning experiences and examined the ways in which market forces could open new opportunities for learners while breaking open traditional models and changing the competitive landscape for both current higher education institutions and new entrants.

360 Degree Learners

How can we **educate the whole person** and enable lifelong learning that supports academic and social-emotional growth?

Redefine career readiness. Given the changing nature of work and the current skills gap among graduates, much attention is being paid to future-ready employment skills. Yet today's focus on job-specific skills does not capture the full scope of what learners will need to know and be able to do as they navigate a rapidly changing world of work. Attributes such as "adaptable," "collaborative," and "self-driven" are likely to be better signs of future readiness. Higher education faculty and administrators can collaborate with the employment sector to reframe career readiness and find ways to help learners develop key attributes alongside academic and professional skills.

Expand support for non-traditional students. Higher education already serves a diverse range of learners who arrive at different stages of life with varying goals, life experiences, and expectations. Yet the sector could do more to meet the academic, social, and developmental needs of the large and growing segment of adult learners and learners from traditionally underserved backgrounds. As more and more people seek post-secondary qualifications and weave in and out of higher education to keep up with the changing world of work, higher education leaders can develop new programs, services, and supports that align with the needs of diverse learners.

Emulate the gap year. As evidenced by growing interest in experiential learning and gap years, learners increasingly expect the experiences in which they participate to engage them fully and authentically, resonate with their interests, and meet their needs. There is also increasing opportunity to use new media such as augmented and virtual reality to extend or create new kinds of learning experiences and help learners cultivate learning lifestyles. To find effective ways of engaging learners within or beyond current institutional structures, higher education leaders can reorient their perspective to regard higher education as an experiential system, not a delivery system.

"Changing worldviews is the key to the future of learning."
— Higher education leader

The Whole, and the Sum of Its Parts

How can **we personalize learning in community**, reorienting education around learners while strengthening society?

Learn from personalized activities outside education. Learning is the only domain in which people regularly equate "interest-driven" with "individual." To find strategies for how to ensure that personalized learning is also social and community-oriented, higher education leaders can look to how people pursue their individual interests in a social context. Even playing video games is now a connected, social activity. Higher education stakeholders can expand their ideas of what personalized learning could look like by drawing upon such practices to facilitate new ways of helping learners pursue their interests in community and to inform new kinds of learning experiences and structures.

Contextualize content knowledge. Content knowledge is sometimes treated as passé and unhelpful in a world in which someone can Google anything. However, for learners to navigate adeptly the communities that will help them pursue their own learning goals, they need to be able to converse with ease on relevant subject matter. Instead of seeing knowledge as either useless or the end goal, leaders can gear knowledge attainment toward full participation in expert communities and networks.

Encourage divergent thinking within connected communities. Some higher education institutions are wary of allowing learners' opinions and experiences to influence institutional decision-making for fear of creating an "echo chamber" in which learners stay within their comfort zones. Yet valuing learner voice and agency and encouraging critical thinking are not mutually exclusive. Higher education leaders can manage this tension by working first to establish trust and inclusion within their institutions and then to encourage divergent thinking.

Elastic Structures

How can we **create flexible approaches to learning and coordination** that respond to learners' needs?

Help people work in new ways. Higher education has a persistent culture and long-established systems that can impede change. Yet faculty and staff are likely to find their roles changing as learning structures diversify and students demand more customized learning pathways. Leaders can encourage new forms of practice by finding ways to encourage risk-taking and providing employee incentives that align with new directions.

Find wedges for change. Pushing for comprehensive change before an institution is ready can be a futile or, worse, counterproductive effort. Instead, higher education leaders can look for openings that offer a foothold that might pave the way to broader change. Emerging departments and programs can help foster innovation because their processes and traditions are less established. Building bridges between new approaches and established frameworks (for example, translating new forms of experiential learning to traditional credit hours) can also help build acceptance.

Become a network. As student demand for customized learning pathways and approaches increases and higher education institutions adapt to the changing landscape, higher education leaders can use network-based structures to help learners access the right experiences and connect with faculty and mentors. New structures could also enable new revenue streams, business models, and interconnections across the sector.

Innovation with Intent

How can we **ground systems change in equity**, including and supporting underserved learners?

Use new tools to broaden access and completion. Higher education needs to increase access and completion rates for underserved learners, not just create better experiences for students who are already likely to succeed. While new tools and platforms such as digital learning companions or unbundled college offerings may in some cases be relatively unattainable to traditionally underserved learners, higher education leaders can develop new options with a focus on the needs of those who are struggling in the current system. Institutions can invest in new forms of learner support, demonstrate the value of the experiences that they offer, and consider shifting current business models or creating entirely new ones.

Treat learners as equal stakeholders. Students facing large amounts of student debt and economic uncertainty are at the center of a debate about the value of a college degree. At the same time, national initiatives are pushing to increase the percentage of the population with a post-secondary credential. While many institutions are working to address these challenges, not all are grounding their change efforts in what learners and communities want and need. Higher education leaders can pursue relevance by turning to current and potential students as guides.

Foster exchange. Given the magnitude of change on the horizon, the existing higher education market might not have the capacity to lead necessary changes on its own. Demonstrating openness to nontraditional partners and to new entrants who share a common vision for learning can encourage cross-pollination of ideas and support emerging change efforts. Current higher education leaders can also provide valuable sources of experience and background to new players.

The New A+

How can we **renegotiate definitions of success**, examining what education systems aim to achieve and who gets to say?

Question purpose. Higher education leaders need to clarify the purpose of higher education. While the answer to that question could vary by type of institution and type of learner and does not have to be singular, a tension between workforce readiness and human development lies at its core. Asking "What is the purpose of higher education?" may seem esoteric and disconnected from today's real pressures and challenges. Nonetheless, leaders who persist in continually returning to the question and who cultivate broad engagement can find clarity of vision and a gauge for their decisions and efforts.

Step out of the race. The rankings race and the mindset that good education is a scarce resource are both harming higher education. Leaders can critically examine whose approval they seek and whose interests they serve and define success accordingly, especially if they are hoping to make fundamental change in their institutions and cultures. In addition, they can advocate for measures of institutional success that support a broad view of student learning, a wide array of rigorous approaches, and acceptance of high-quality alternative credentials.

Broaden data use. Data in higher education is most often used to judge students' past academic performance and to demonstrate that institutions are meeting their obligations. As data becomes more extensive and more ubiquitous, higher education leaders can use mechanisms such as real-time dashboards, data-driven learning pathways, and comprehensive data portfolios to demonstrate the value of learning experiences, help learners select experiences, and support learners in monitoring the outcomes that are relevant to them.

Shaping the Future of Higher Education

Institutions of higher education have fostered countless inventions, discoveries, and ideas that have changed the world. They have also served as the gateway to a better life for millions. Nonetheless, their cultures and structures tend to be well established and slow to change. As these strategies indicate, the sector has a significant opportunity to broaden the kinds of supports and experiences that it provides learners. Even as institutional business models diversify, collaborating across and beyond the sector will be crucial.

"The future of higher ed is already here! What are we going to do to catch up?"

— Higher education leader

"Higher education is both a bastion of its own status quo and a repository of innovation."

— Higher education leader

Leading the Future of Learning

Navigating the future is hard work. Charting a course forward is like aiming for a blurry horizon that shifts constantly as forces of change swirl together in different ways and people's decisions and actions change the landscape along the way. But it is essential for education stakeholders to lead that change. We need to develop strong future-facing visions that will guide our efforts to overcome the inertia of the status quo, form effective strategies, and bring others along on the journey.

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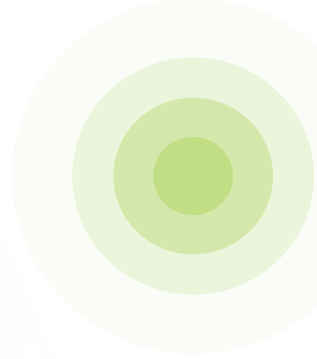
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K-12

community-based learning

higher ed

Leading Change in Education

Regardless of which sector you occupy or which strategies you decide to explore further, the cross-sector insights below can help you and other education leaders and innovators lead the way toward the future of learning. These insights focus on leading change in the face of uncertainty, complexity, and organizational resistance.

We can influence the trajectory of change. Despite the sense we sometimes have that change is happening to us, trends are not inevitabilities. We can shape, mitigate, and enable them.

Forming partnerships can create new possibilities. Every education sector has opportunities to reshape learning by building intentional partnerships rooted in common values – not necessarily in convenience – with other organizations and with communities and learners. Working across sectors can also create more coherent and meaningful opportunities for learners.

Coordination and matching services can help meet learners' needs. Education stakeholders can leverage new forms of coordination and new platforms for connection to help match learners with personalized learning experiences and supports.

Emerging technologies can enable new solutions. Considering technological advancements with an open mind and critical thinking can help education stakeholders identify how to use them to catalyze change effectively and equitably. Cautions include focusing on flash over substance, using new technologies in old ways, and placing technology above relationships.

Taking a systemic perspective can maximize impact. Not every problem can be solved with a new program or tool. Considering the larger systems at work when evaluating solutions can enable leaders to intervene at the right level. Working across sectors can also help foster sustainable systems change.

Examining gridlock can identify leverage points. In education, the pace of change is slow and the forces of inertia are strong. Instead of accepting the intractability of current systems and organizational structures, leaders and innovators can investigate the causes of gridlock for leverage points to influence.

Every big change begins with a single step. Though large-scale change is incredibly difficult, every big idea has a smaller first step. Leaders at every level and in every sector can take action today to begin defining their role in shaping the future of learning.

"Seemingly unrelated areas can work together to create transformational change."
— K-12 leader

Taking Action Now

Future approaches to learning need to educate the whole person, personalize learning in community, create flexible approaches to learning and coordination, ground systems change in equity, and reflect new definitions of success. For that to happen, today's education leaders and innovators need to play a central role in shaping the future of learning. Striking the delicate, shifting balance between moving toward a future vision while stewarding today's organizations and responding to current reality is possible.

Strategic Questions

As workshop participants emphasized, there are many things we can do now to shape the future, beginning with exploring the questions below.

- What is your vision for the future of learning for your institution or organization?

- Which strategies outlined here could move you closer to that vision?

- What specific tactics might your organization employ in service of those strategies?

- What resources — time, personnel, influence, or partnerships — could you find or redirect to implement those tactics?

- Where might you begin? What is the first step toward change for your organization?

We invite you to use KnowledgeWorks' forecast on the future of learning and this guidance from colleagues across education as starting points for envisioning what you would like the future of learning to look like and considering how you might contribute to creating a future of learning that serves all learners and society well.

"We must stop talking about changing education and start doing it. The world is different — just look around."

— Community-based learning leader

For Forecast 4.0 and other resources, go to knowledgeworks.org/future-learning.

About KnowledgeWorks

KnowledgeWorks is focused on ensuring that every student experiences meaningful personalized learning that allows them to thrive in college, career and civic life. We develop the capabilities of educators to implement and sustain competency-based and early college schools, work with state and federal leaders to establish aligned policy conditions, and provide national thought leadership around the future of learning. Our subsidiary, StriveTogether, manages the national cradle-to-career network and helps communities improve student outcomes through collective impact. Learn more at **www.knowledgeworks.org**.

About the Authors

Katherine Prince leads KnowledgeWorks' exploration of the future of learning. As Senior Director, Strategic Foresight, she speaks and writes about the trends shaping education over the next decade and helps education stakeholders strategize about how to become active agents of change in pursuing their ideal visions for the future. Katherine holds a BA in English from Ohio Wesleyan University, an MA in English from the University of Iowa, and an MBA from The Open University and is a member of the Association of Professional Futurists.

Jason Swanson is the Director of Strategic Foresight at KnowledgeWorks, where he helps lead the organization's research into the future of learning. Jason holds a BA in Public Policy from West Chester University and an MA in Foresight from the University of Houston, is a fellow with the Royal Society of Arts, and is a board member of the Association of Professional Futurists.

Katie King served as Graduate Intern, Strategic Foresight at KnowledgeWorks, contributing to the organization's research on the future of learning and developing creative ways of engaging people with future possibilities. Katie holds a BA in Print Journalism from the University of Southern California and is completing her MA in Foresight at the University of Houston. Having taught middle school English for five years, she focuses her foresight practice on the social sector and in particular on education.

K-12 School-Based Education Workshop Participants

- **Russ Altenburg**, Co-Founder, Reframe Labs
- **Amy Anderson**, Director, ReSchool Colorado
- **Colleen Broderick**, Chief Learning Designer, ReSchool Colorado
- **Leslie Colwell**, Vice President, Education Initiatives, Colorado Children's Campaign
- **Jim Flanagan**, Chief Learning Services Officer, International Society for Technology in Education
- **Jean Garrity**, former Associate Director, Institute of Personalized Learning Division of CESA #1
- **Valerie Greenhill**, President, EdLeader21
- **Rebecca Holmes**, Senior Program Officer for Education, Gates Family Foundation
- **Christina Jean**, Director, Innovation and Choice, Colorado Department of Education
- **Matt Jordan**, Director of Strategic Initiatives, Education Commission of the States

- **Rebecca Kisner**, Strategy Associate, ReSchool Colorado
- **Eric Lerum**, Vice President of Growth and Strategy, America Succeeds
- **Meg McCormick**, Director of Planning and Design, Denver Public Schools Innovation Lab
- **Rebecca Midles**, Executive Director, Performance Based Learning, Mesa County Valley School District 51
- **Gretchen Morgan**, former Executive Director, Choice and Innovation Unit, Colorado Department of Education
- **Amy Morton**, former Chief Academic Officer, Central Susquehanna Intermediate Unit
- **Samantha Olson**, Director, Next Generation Learning, Colorado Education Initiative
- **Anne Olson**, Director of State Advocacy, KnowledgeWorks

- **Beth Peterson**, Branch Manager, Division of Innovation and Partner Engagement, Kentucky Department of Education
- **Jenny Poon**, Director, Innovation Lab Network, The Council of Chief State School Officers
- **Hunter Railey**, K-12 Policy Researcher, Education Commission of the States
- **Steve Schultz**, Superintendent, Mesa County Valley School District 51
- **Matt Williams**, Vice President, Policy and Advocacy, KnowledgeWorks
- **Wendy Wyman**, Superintendent, Lake County Schools

"There is great hope and opportunity in reinventing schools."

— K-12 leader

Informal and Community-Based Learning Workshop Participants

- **Tiffany Brunetti Monroe**, Director of Operations, TIES Teaching Institute for Excellence in STEM

- **Shelly Casto**, Director of Education, Wexner Center for the Arts

- **Sunanna Chand**, Learning Innovation Strategist, Remake Learning Council

- **Kenton Daniels**, Assistant Director, Pickerington Public Library

- **John Falk**, Sea Grant Professor of Free-Choice Learning, Oregon State University

- **Cindy Foley**, Executive Assistant Director, Director of Learning and Experience, Columbus Museum of Art

- **Lindsey Frost**, Program Director, Mozilla Foundation

- **Marina Hopkins**, Volunteer Mobilization and Alignment, Strive Partnership

- **Sarah Jesse**, Associate Vice President of Education, Los Angeles County Museum of Art

- **Heather Kellert**, STEM Coordinator, PAST Foundation

- **Bill Kelley**, Adult Services Manager, Cuyahoga County Public Library

- **Steve Krak**, Director of International STEM School Design, TIES Teaching Institute for Excellence in STEM

- **Nick Lolopulos**, Director of Education & Technology, Columbus Idea Foundry

- **Kristen Mihalko**, Manager, Programs and Communication, Balboa Park Learning Institute

- **Jesse Moyer**, Director of State Advocacy and Research, KnowledgeWorks

- **Sadie Norwick**, Manager of Learning Programs, Shedd Aquarium

- **Ketal Patel**, Director of School Design, PAST Foundation

- **Judy Peppler**, President and CEO, KnowledgeWorks

- **Michael Robbins**, Founder, Span Learning

- **Marsha Semmel**, Principal, Marsha Semmel Consulting

- **Lori Trent**, Business Innovations Manager, PAST Foundation

- **Carol Varney**, Executive Director, Bay Area Video Coalition

"Interest-driven learning is not a fad – it's the future."
– Community-based learning leader

Higher Education Workshop Participants

- **Ben Blair**, Founder, Teachur
- **Brian Bridges**, Vice President, Research and Member Engagement, UNCF
- **Angel Clay**, Associate Director of Pathways and Academic Alignment, Achieving the Dream
- **Steve Dackin**, Superintendent of School and Community Partnerships, Columbus State University
- **Jim Fowler**, Assistant Professor, Mathematics, The Ohio State University
- **Kate Harkin**, former Director, P12 Initiative, The Ohio State University
- **Holly Harris-Bane**, Vice President, Northeast Ohio Council on Higher Education
- **Mary Heiss**, Senior Vice President, Academic and Student Affairs, American Association of Community Colleges

- **Matthew Henry**, Dean of Innovative Education and Chief Information Officer, LeTourneau University
- **Andy Hines**, Assistant Professor and Program Coordinator, University of Houston Foresight Program
- **Nancy Hunter Denney**, Executive Director, Lead 365
- **Tony Kreisel**, Trustee, Franklin and Marshall College
- **Mark Lacelle-Peterson**, Senior Vice President Policy and Program, AACTE
- **Shannon Looney**, Project Manager, USU/APLU Office of Urban Initiatives
- **Amma Marfo**, President, Lead 365 Foundation
- **Andrea Saveri**, Owner, Saveri Consulting

- **Yvonne Simon**, Chief Learning Architect, College for America at Southern New Hampshire University, Southern New Hampshire University
- **David Staley**, Associate Professor of History and Design, The Ohio State University
- **Derek Woodgate**, Adjunct Professor, The Future of Education and Learning, Georgia State University

"There are existing platforms and media to create new learning experiences now. Institutional willingness is a barrier."
— Higher education leader

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