

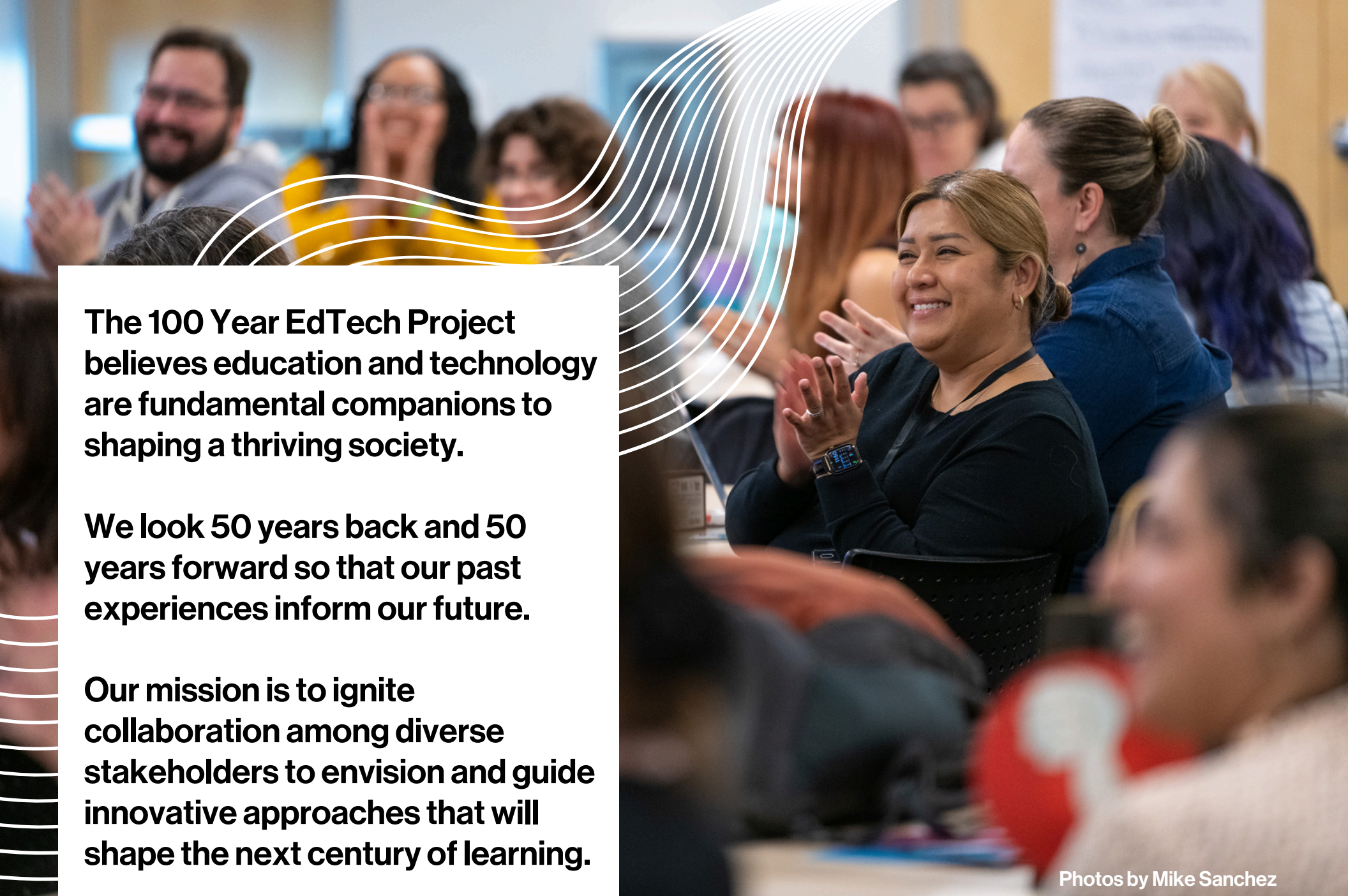
The

100 Year

EdTech Project

2074 Guide

Education and technology changemakers across the globe
strategically plan for the next 50 years



The 100 Year EdTech Project believes education and technology are fundamental companions to shaping a thriving society.

We look 50 years back and 50 years forward so that our past experiences inform our future.

Our mission is to ignite collaboration among diverse stakeholders to envision and guide innovative approaches that will shape the next century of learning.

Photos by Mike Sanchez

100yearedtechproject.org

ASU Enterprise
Technology
Arizona State University

SAB Creative &
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STORY
CENTER

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Foreword from Lev

Fifty years ago, the inventions of the internet and personal computers revolutionized the way we learn.

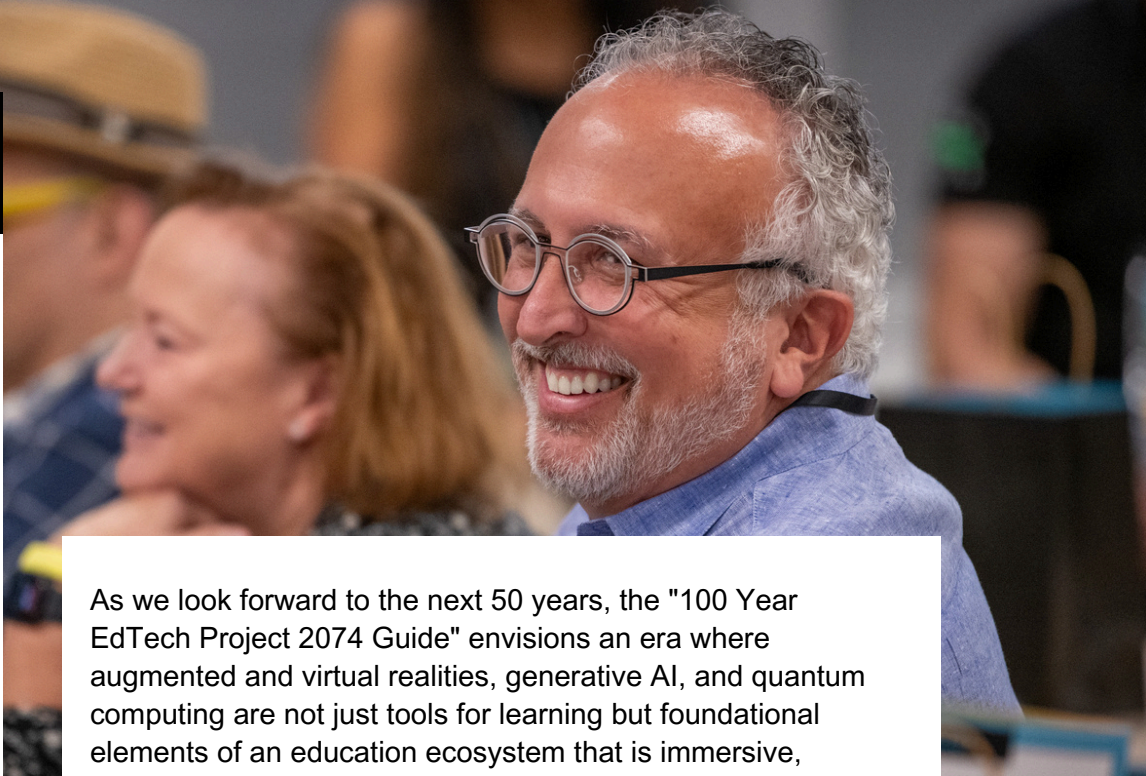
Early pioneers like [Douglas Engelbart](#) saw the opportunity to leverage emergent technologies to establish "network improvement communities" and augment our collective capabilities to tackle the growing set of global challenges from environmental catastrophe and nuclear proliferation to hunger and poverty alleviation.

Other pioneers, inspired by BF Skinner's behaviorism and the teaching machine, introduced computer-based training programs as a way to harness machine capabilities to achieve more efficient and effective outcome measures.

A central theme of the past 50 years has been our human relationship with each other and the machines we invent. The same will be true in the next 50 years.

The last 50 years witnessed disruptive technologies aimed at democratizing education, redesigning pedagogies to align to the new technologically enabled art-of-the-possible, and removing geographical and socio-economic barriers to learning. Over the same time, the first two generations of learning engineering research, course management systems and data-informed decision technologies matured and significantly shaped the educational technology landscape.

Those who aim to augment and improve the human condition, alongside those guided by algorithms and the integration of humans and machines, have all played a part in creating transformative learning experiences. Compared to the long arc of human history, education has become more accessible, engaging and personalized.

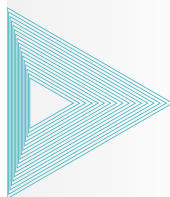


As we look forward to the next 50 years, the "100 Year EdTech Project 2074 Guide" envisions an era where augmented and virtual realities, generative AI, and quantum computing are not just tools for learning but foundational elements of an education ecosystem that is immersive, inclusive, adaptive, outcomes-focused and rigorous.

Co-authored by educators, learners, policy makers, and technologists, this guide underscores the importance of equity, access, and learner-centric design, urging stakeholders across the spectrum to join forces in creating learning experiences that are not only technologically advanced but also deeply human.

This journey towards the future of education is underpinned by principles that prioritize universal access, understanding and honoring that place matters, and the notion that technology must serve as an enabler of principled innovation. It challenges us to rethink the role of education in society, to ensure that it not only adapts to but also anticipates the needs of future generations.

By doing so, this guide serves as a roadmap and a call to action, inviting us to imagine, innovate and invest in a future where education transcends traditional boundaries and embraces the digital age.





1964 - 73

1968: Engelbart's Mother of All Demos

1969: Arpanet

1971: Personal Computers and Instant Messaging

1972: Email

1974 - 83

1974: Cerf and Kahn: A Protocol for the Internet

1982: First instance of "online learning"

1984 - 93

1987: First mobile phone

1989: First fully online degree program (University of Phoenix)

1992: First "smart phone" (Nokia)

1993: First web browser (Mosaic)

The Past 50 Years of Education

1994 - 2003

1994: School internet

1995: First commercial VR headset

Privacy-enhancing tech

1996: First accredited, web-based university

1998: First LMS

2000: The intro of OERs

2009: BYOD

2010: Flipped classroom + MOOCs + learning analytics

2011: Gamification and digital badges

2003 - 13

2012: Personalized Learning Environments

2013: Pilots with adaptive learning technologies

2014 - 23

2014: Blockchain and crypto

2015: Launch of Open AI

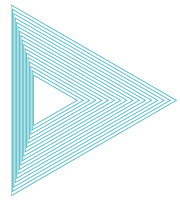
2018: Chatbots and virtual assistants proliferate

2020: Remote learning; virtual labs/simulations

2023: Mainstream adoption of generative AI

and Technology: At a Glance

Executive Summary



The year is 2074. What does the world look like? How are societal and technological trends impacting education – and vice versa?

We can close our eyes and begin to imagine, or we can open a book. Stories, particularly science fiction, have long played a crucial role in helping individuals and societies prepare for the distant future. By envisioning various possibilities for technological advancements and societal transformations, storytelling instantly expands our perspectives and introduces the art of the possible.

From *1984* and *Fahrenheit 451* to *The Twilight Zone* and *Ready Player One* to *The Matrix* and *Black Mirror*, humanity has explored the most complex ethical dilemmas and physical disasters within fictional contexts. The stories prompt more specific reflections on the potential challenges we may face – and what we need to do to survive and thrive.

The 100 Year EdTech Project 2024 Design Summit convened changemakers across the globe to discuss the challenges facing education today, and to envision the precious possibilities and innovations that can enable greater access to knowledge and equitable outcomes, delivered at scale. With each person bringing their own unique

lenses and experiences, creative storytelling was an organizing vehicle for inspiring our imaginations about what the next 50 years could hold. This publication summarizes the eight science fiction scenarios, ranging from climate disasters to culturally responsive AI curriculum to genetically modified humans, addressed by Summit participants and offered as collaborative solutions.

In the short span of 20 years, we've seen personal computers and smartphones change how we learn. And today, we're witnessing and contributing to the expansion of immersive learning, through XR – ushering in the ability to visit historic monuments and past moments in history any given day. Generative AI and social media have made us all content creators, giving us massive platforms to contribute our voices to the story of our times.

The innovations of today have us accelerating toward the future at breathtaking speed, and we must carve out intentional time and space to ingrain our humanity in the products, tools and approaches we're creating. The Tin Man may have never had a heart when he was characterized in 1939, but it turns out we need our artificial intelligence to gain more emotional intelligence after all.

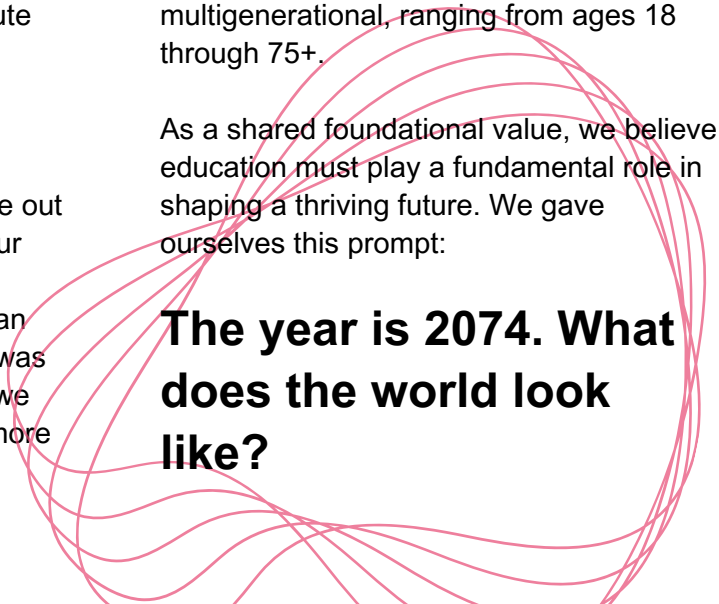
A founding principle of the 100 Year EdTech Project was that we need time to reflect, plan and assert our humanity in the technology-enabled future we create. And, in order to do so, we need wide representation from participants that reflect a cross-section of the communities that make up our present and our future.

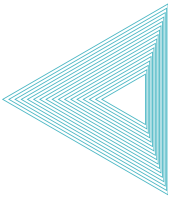
This was the premise of our first [Design Summit](#) from February 28 to March 1 in Scottsdale, Arizona at Skysong, the ASU Innovation Center, where 185 participants spanned more than 60 organizations.

This included university and school leaders, faculty and educators, students, technologists and futurists at the intersection of education, society and technology. The group was intentionally multigenerational, ranging from ages 18 through 75+.

As a shared foundational value, we believe education must play a fundamental role in shaping a thriving future. We gave ourselves this prompt:

The year is 2074. What does the world look like?





First, to state the obvious, we're likely not around, and neither are our children. What world have our grandchildren and great grandchildren inherited? How has education helped us arrive at the world they are experiencing? How are societal and technological trends impacting education? Perhaps most importantly:

Are our descendants still having the same conversations that we had in 2024?

This publication serves as a synthesis of our shared experience, with overarching highlights aimed at provoking us to plan further into the future. Our timeline has just begun. And, our report closes with a call for you, the reader, to join us in advancing this 100 Year EdTech Project.

Who is the 100 Year EdTech Project for?

Maybe you're someone who already engages in futuristic thinking. Or maybe you're an institutional or organizational leader. Maybe you're an advocate for social and technological progress. Maybe you're an educator or researcher.

Regardless of your career choice, you are always a learner first.

As lifelong learners, we're not just collectors of knowledge; we're creators of the future we imagine.

We're called to be active contributors, shaping the world we want to see. This guide was created by a group of people deeply concerned with and committed to the future of education, and we believe all kinds of stakeholders must come together to design sustainable solutions to our thorniest challenges – seizing every discovery and trend as an opportunity to build capacity within our education systems for learner and societal success.

No one group can do it alone, so we invite you to join us.

Act 1: The first steps to the future

While our project scope is 100 years of future design, we are defining our “Act 1” as the next 50 years. Technological, social, and political change is the norm in Act 1, and adaptability is a core skill set that must be learned.

From climate crisis to genetically modified humans to culturally responsive AI, change continues to accelerate. The nature of employment evolves. Our relationship to the planet and our fellow species becomes more personal.

Our sense of place expands as interstellar travel expands and blurs, as mobile devices allow us to be everywhere at once.

And, during Act 1 the timeless conversations about access, equity, scale are cornerstones to our decision making, keeping us in orbit while we accelerate

The 100 Year EdTech Project defined **7 Design Principles** and **4 Solution Types** that will endure throughout the first 50 years. They form the architecture.

It is our hope this guide will be a springboard for more intentional strategic planning around our long-term futures. In it, we'll share what we did together, why and how we did it, where the hot spots and intersections were – and our cumulative provocations for you, dear reader, on how you can help shape the next 50 years of education.

The year is 2074. Do physical campuses still exist? Is our generative AI still riddled with human bias? How will genetic advancements necessitate our spaces and approaches to education to evolve? Are dolphins and humans coexisting?

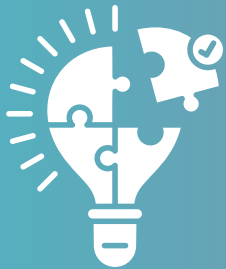
Step into the future with us...

100 Year EdTech Project Framework Summary



7 Design Principles

1. Learners must be at the center.
2. Universal access is a foregone conclusion.
3. Technology must be an enabler of principled innovation.
4. The past is a bridge to the future.
5. We must make complex topics easier for all to engage in.
6. Place matters.
7. The future of education is multigenerational and multicultural.



4 Solution Types

- 1. Policies:** Guidelines to navigate complexities and ensure equitable access and outcomes
- 2. Resources:** Funds to support educational initiatives and address disparities
- 3. Innovations:** Technology advancements to enable positive transformation
- 4. Social Capital:** Community engagement to cultivate support and action



8 Future Scenarios

1. Climate impact
2. Culturally responsive AI curriculum
3. Genetically modified humans
4. Teaching in a post-truth era
5. Interspecies communication
6. Extended Reality and historical revisionism
7. Mental wellbeing in the digital age
8. Trauma-informed teaching



6 Emergent Trends

1. AI and new approaches to learning
2. Spatial computing technologies, including immersive tools
3. Automation as a disruptor, altering world economics and learning
4. Identity shifts - evolving demographics, social and political dynamics
5. Health technologies - impact on aging, chronic disease and altering genetics
6. Disruptive science technologies - nano, quantum and space

Context

Why Do This?

Many studies and articles exist talking about the present challenges and opportunities with education and technology. To our knowledge, no research in the current body of work specifically addresses or illuminates a 50-year view. However, if we're only thinking about today and tomorrow, we may be planning for scenarios that are obsolete by the time the next generation is born.

It is our ultimate goal to provoke the kind of thinking and collaboration now that we'll need to face anything with resilience, empathy and strategy.

Finding Our Foundation: Design Principles

Before we get to the future, we have to think about the present. [The 100 Year EdTech Project](#) was created to bring together the diversity of voices needed to actualize evolution – and revolution. Born in June 2023 in a retreat with 25 changemakers at Ghost Ranch in New Mexico.

Together, our premise was to “reflect meaningfully on the past 50 years in order to create a vibrant vision for the future of education, while considering who and what needs to be involved.” ([View the initial report.](#))



Looking at the previous 50 years of technology, how has society changed to accommodate the new ways we were interacting with each other? After reflecting on the leaps of development within learning technology, we recognized a pattern of values that evolved into our design principles for future approaches to learning:

1. **Students and learners must be at the center.**
2. **Universal access is a foregone conclusion.**
3. **Technology must be an enabler of principled innovation.**
4. **The past is a bridge to the future.**
5. **We must make complex topics easier for all to engage in.**
6. **Place matters.**
7. **The future of education is multigenerational and multicultural.**

The original 25 changemakers agreed that our small group was hardly a representative subset of the field of education and technology, so our goal was to ensure we

gathered and captured more voices. Thus, the idea of expanding our original group to a wider set of participants at a Design Summit was born.

Stories: Setting the Scene for Consensus Building

The StoryCenter crafted eight “science fiction” scenarios in the form of ~two minute videos featuring characters faced with pressing societal challenges. Those stories – our “Future Scenarios” – seeded working groups at the event – sessions where participants would address the 100 Year EdTech Project’s research questions and start to seek and design solutions.

As the future unfolds, we arrive at a place of group authorship: how will we respond, collectively, to new challenges brought by disruptors like artificial intelligence and climate change? What solutions will emerging technologies enable? How will our interactions with each other change?

Framework

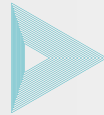
As we look ahead to the next 50 years, our aim is to offer a descriptive perspective rather than a prescriptive plan. The future should allow for improvisation while providing a solid foundation to guide our trajectory. By using design principles as guiding stars, we've crafted a framework to provide sufficient structure for collaborative efforts. This framework aids in navigating the complexities of challenges and opportunities, fostering the generation of potential solutions for our most profound future scenarios.

Design Principles as Research Questions

The foundational design principles crafted at the initial planning retreat in New Mexico seeded overarching research questions to align and inform group design sessions in Scottsdale:

1

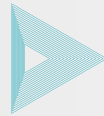
Students and learners must be at the center.



Will we still have a meaningful distinction between the various segments and organizational constructs in education – and how will we accommodate?

2

Universal access is a foregone conclusion.



How will we advance access and equity so that every learner gets the education they need to thrive?

3

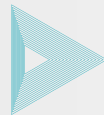
Place matters.



How can we leverage our place in the solutions we generate?

4

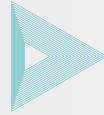
The past is a bridge to the future.



What about the past 50 years do we need to take in account for planning?

5

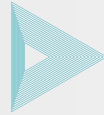
We must make complex topics easier for all to engage in.



How will we explain this to the public and get support/engagement?

6

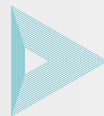
Technology must be an enabler of principled innovation.



What role will technology play in catalyzing positive change?

7

The future of education is multigenerational and multicultural.



How are we integrating diverse communities?

Future Scenario Planning

Design Summit participants were asked to select which subjects and future scenarios they most wanted to personally address. Each noted their preferences based on professional expertise and passion. As such, there were nearly 20 working groups at the Summit, tapping the collective intelligence of participants to develop 1) a shared understanding of each future scenario and 2) approach to designing sustainable solutions.

1. Climate change and the role of education:

When education institutions are the #1 trusted civic authorities and forces for community impact

2. Culturally responsive AI curriculum:

When new learning experiences reflect diverse communities, avoid bias and bolster inclusion

3. Genetically modified humans:

When we understand the impact of enhanced mental and physical capabilities on education and society

4. Teaching in a post-truth era:

When teaching critical thinking and the value of empirical evidence is vital in the face of people ignoring objective facts

5. Interspecies communications:

When we advance our space exploration and understand the needs and goals of extraterrestrial visitors to collaborate

6. Extended reality and historical revisionism:

When historical sites and moments are recreated in XR to align with personal and political agendas

7. Mental wellbeing in the digital age:

When digital addiction and social media become the ultimate health threats

8. Trauma-informed teaching and learning:

When the pandemic is winding down but the social and emotional consequences are still rippling across the world



Starting with Learner Voice

The Design Committee deemed it essential that the Design Summit open with an all-learner panel and moderated by an individual with close connections to the student perspective. We were able to curate a group of learners ranging in age from 19 to 75.

Both the youngest and eldest students are enrolled in undergraduate courses, looking to gain new knowledge and skills. The spectrum of ages in of itself makes an important statement about the nature and identity of learners today and into the future. If we are designing for a system where 18-21 year-olds are our target audience for higher learning, we are designing education models for a world that no longer exists given the continuous and lifelong nature of learning and learners that increasingly counter traditional notions of students. That is why the 100 Year EdTech Project is opting to use the term learners over students – a more inclusive position.

The learners collectively surfaced themes they hoped would guide Summit participants in addressing future scenarios,



tackling everything from better integrating academic with real-world and career opportunities to ensuring all learners, regardless of background, have access to the same high-quality learning experiences. The notion that the “real world” is a separate entity from higher education, is a symptom of a larger disconnect that exists today. If learners are vital collaborators in shaping the next 50 years, we better understand their evolving needs.

Learners also addressed how uncertainty about the future along with a sense that society is disorganized, can create a sense of anomie or anxiety that seeps into one’s learning experiences. There was a call to consider how technologies can enable and extend human capacity rather than simply replace humans, and to harness tech, such as virtual and augmented reality, to immerse students in experiences that can prepare them not only for jobs, but inspire and excite them.

Mental wellbeing, particularly in an increasingly digital world, was especially emphasized as a key component of education regardless of program or scenario. Summit participants were encouraged to consider more comprehensive and holistic views of how learners can and should be supported throughout their lifetimes. This means acknowledging that demographics and societal needs are continually shifting under our feet like a conveyor belt.

The learner panel served as an important touch point for Summit participants through the duration of the event and provided a certain magnetism by which ideas were drawn together with learners at the center. This helped reinforce one of the key design principles for the Summit:

How will we advance access and equity so that every learner gets the education they need to thrive?



Considering Emergent Trends and Impacts

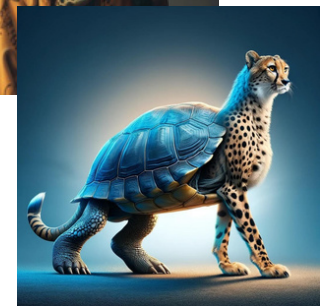
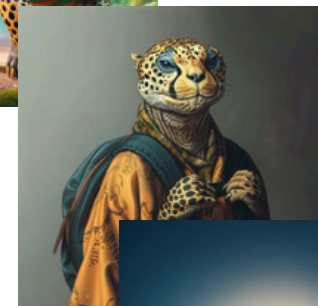
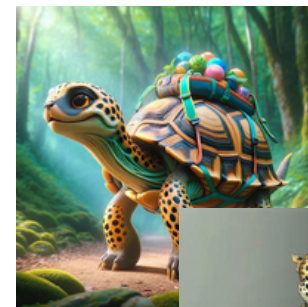
Before breaking into working groups to address each scenario, participants heard from a global panel of subject matter experts in areas poised to significantly shape our collective future. Each panelist posited the implications and effect of one (or more) of the below trends. This list was not meant to be exhaustive, but instead offered shared lenses for the groups.

- AI and new approaches to learning and content creation
- Spatial computing technologies, which include immersive tools and their integration into learning and working
- Automation as a disruptor, altering world economics and learning
- Identity shifts in the form of evolving demographics, social and political dynamics and overall well being
- Health technologies and their impact on aging, overcoming chronic disease and altering genetics
- Disruptive science technologies such as nano, quantum and space

The panel both celebrated our technological futures while cautioning about some of the risks and challenges tech brings. For example, patients having access to knowledge once reserved for medical practitioners coming prepared to appointments, shifting lower order knowledge tasks to patients and allowing the provider role to shift to one of empathy, connection, and communication. Or, a future – one that is already here in many ways -- where humans can be co-creators, cohabitants, and companions with technology; and where degrees are not bounded by borders.

Immersive learning has opportunities to motivate, excite, and give access to experiences one might not have in everyday life, but it also requires time and energy to build these tools and environments, with budgets often beyond the reach of educational institutions. AI may someday solve this problem, allowing teachers to create a fully interactive experience using prompts in an AI engine.

Academic institutions can be slow to change. Yet, the COVID pandemic shows us that institutions can also pivot quickly when a need arises. Educators had to confront how much they didn't know about their learners and quickly solve problems such as inequitable access to the internet, and adjust to geographic shifts with no distinct boundaries between classrooms and lived experiences. This discussion led participants to generate an icon, of sorts, meant to represent the academic institution: a turtle with cheetah spots. This spotted turtle (variations below created in AI by Summit participants) was meant to serve as a reminder that change -- especially change for the better -- is possible with the right people and motivations.



Solution Types

In order to seek meaningful, critical outcomes, an active approach to understanding the world in new ways is imperative to developing a shared vision for the future. Organizing our solutions into four categories, we recognize the interconnected nature of the systems and constructs we engage.

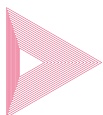
- **Policies:** Crafting regulations and guidelines to navigate complexities and ensure equitable access and outcomes in education
- **Resources:** Allocating and managing funds and investments effectively to support educational initiatives and address disparities
- **Innovations:** Fostering creativity and embracing technological advancements to enable positive transformation in education
- **Social Capital:** Building networks, partnerships and community engagement to cultivate support and enhance collaboration in educational initiatives

Depending on your perspective, you might see more potential in one solution type over another. However, as we look towards the future of education, we understand the importance of reaching consensus across representative communities. Governments and organizations make policies to modulate resources; technology and other innovations interact with our systems' environment and our social networks and partnerships develop our sense of community and collaboration.

Wherever you fall within this web of changemaking, your voice is necessary to build consensus.

Consensus exists in many names and forms across the world – and is an age-old mechanism for decision making. In short, everyone shares their voice when approaching a new policy. The more voices heard, the more considerations that can be made when applying a solution. Criticisms of consensus exist; usually surrounding the pace of change that it takes.

Our intention in this design is to recognize and honor people's authentic experiences. Sharing our stories and building consensus provides a communal sense of authority and a shared authorship of our stories' future.



8 Scenarios for the Future

If we could redo the last 50 years, what would we do?

The 100 Year EdTech Project 2024 Design Summit future-casted potential scenarios for the year 2074. Guided by videos, participants explored eight distinct futures, applying their expertise to dissect and propose recommendations for the next five decades. This section offers a concise overview of each scenario, accompanied by its video prompt and initial findings from collaborative group work at the Summit. Concluding with actionable recommendations, these insights are categorized under themes of policy, innovation, resource needs, and social capital.



Scenario summary

The Design Summit group envisioned a new role for schools, colleges, and universities that would serve as Community Connection Centers in the event of a climate disaster. Centers would serve as a place for people to find security and continuity, and contribute to the health of themselves and the systems around them. Unlike current day disaster centers, the group envisioned a place that would not only triage emergency care, but would be equipped to foster community, intake and evaluate the expertise of those using the center for the benefit of survivors. These places would also provide the education and training needed to sustain the community beyond the disaster.

Recommended solutions

Policy

Parents, students, and educators must advocate for comprehensive climate education in school curricula, allocating resources for teacher training and curriculum development. School boards and governments will adopt policies that are demanded by their constituents.

Innovation

Virtual reality simulations and augmented reality tools should be invested in, tested for efficacy and expanded, to immerse learners in real-world climate scenarios, fostering experiential learning.

Resource Needs

Investment in renewable energy infrastructure and partnerships with environmental organizations can provide hands-on learning opportunities for students

Social Capital

Collaboration with local communities and industry experts can enrich climate education initiatives, connecting learners with real-world solutions.

[Read more about Scenario 1 in the source material from the Design Summit.](#)



Scenario summary

The group concluded that unless immediate changes are made in the development of AI and the LLM and algorithms that fuel them, historical biases and inequities would persist and extend well into the latter half of the 21st century. Because AI is a product of human ingenuity, it must be governed by people.

The group envisioned the formation of the AI Ethics and Learning Alliance to advance culturally responsive AI. This governance organization would convene with a mission to “...foster development and community governance of accessible and ethical AI solutions that create equitable opportunities in learning that lasts for generations to come.”

An example of the work of the Alliance that was shared was the creation of a labeling system similar to nutrition labels on food products. AELA labels could identify data sets used to develop the information being consumed, providing among other insights, transparency on those funding the information.

Recommended solutions

Policy

Education boards should mandate the integration of culturally responsive AI modules in curriculum standards, ensuring representation and equity.

Innovation

AI algorithms must undergo rigorous testing for bias and fairness, with oversight from diverse interdisciplinary teams.

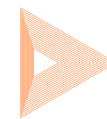
Resource Needs

Funding for research on culturally inclusive AI technologies and partnerships with marginalized communities to co-create curriculum content. Identification of \$30M to fund the first three years of startup operations of the AI Ethics and Learning Alliance.

Social Capital

Collaboration with cultural institutions and community leaders can provide valuable insights and resources for developing culturally responsive AI curriculum.

[Read more about Scenario 2 in the source material from the Design Summit.](#)



SCENARIO 3

Genetically engineered humans



Scenario summary

The Design Summit participants addressed that within the next 50 years, there will likely be extensive use of genetic modification via technological advances that make the deletion, replacement and insertions of genes more broadly available.

These technologies will accelerate diversity in human capacity (e.g., cognitive, physical, wellness, memory, age), requiring enhanced educational models to drive the next 50 years that expand individualized and personal learning.

The design group ideated on the concept of the “Pluralversity” – an open-access learning platform driven by AI that would tailor education to individuals and be responsive to their abilities and interests. This vision might connect educational resources directly into human biology through technology connected to biometric data. An example could be a personalized VR-powered education experience where each person becomes their own living, breathing, individualized university.

Recommended solutions

Policy

Governments must establish regulatory frameworks for genetic enhancement research and education, balancing innovation with ethical considerations.

Innovation

Biotechnology labs in educational institutions can provide hands-on experiences with genetic engineering techniques, promoting ethical discussions.

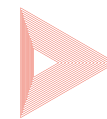
Resource Needs

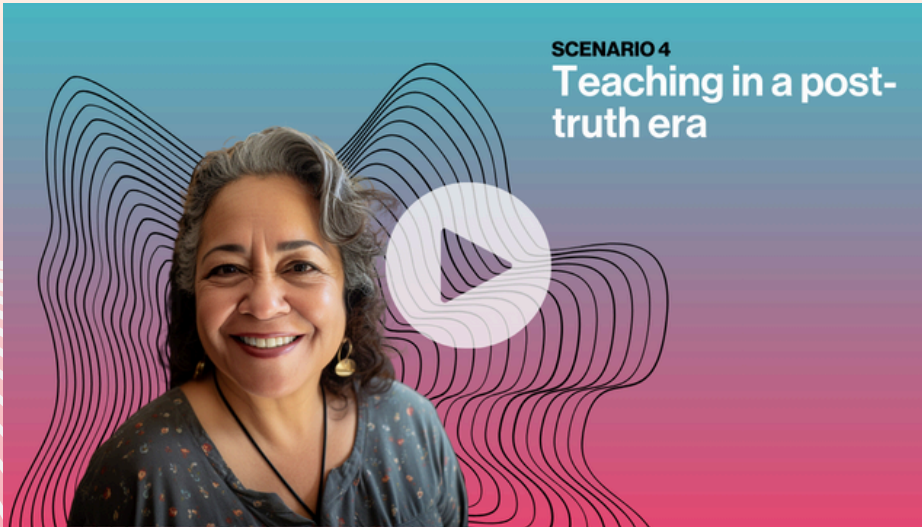
Investment in bioethics education programs and access to cutting-edge genetic sequencing technologies for research and experimentation.

Social Capital

Engagement with ethicists, religious leaders, and policymakers can inform ethical guidelines and foster public dialogue on genetic enhancement.

[Read more about Scenario 3 in the source material from the Design Summit.](#)





Scenario summary

After reviewing this scenario, the Design Summit group reflected on the risks that AI is posing to social cohesion due to the fracturing of shared truth via the algorithmic reinforcement of specific ideas and philosophies.

To adapt to these headwinds, the group advocated for deepened commitment to, and investment in education that promotes ethics, critical thinking, and logic, reminding us that some solutions for the future are centuries-old pursuits. The group also identified the need for educational institutions to adapt curricula to promote digital literacy and update general education requirements to reflect the need for critical thinking, media literacy and AI literacy.

Additionally, the group advocated for the idea of the “Flexiversity” – a future vision for a university that is less reliant on permanent campuses and more responsive to educational needs of individuals who are placebound in “education deserts.”

Recommended solutions

Policy

Education ministries should mandate media literacy and critical thinking courses in school curricula, supported by public awareness campaigns.

Innovation

Online platforms can deploy algorithms to flag misinformation and promote fact-checking tools, empowering users to verify information.

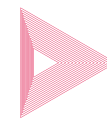
Resource Needs

Funding for media literacy training for educators and the development of age-appropriate resources for teaching critical thinking skills. Prototyping of the Flexiversity to design a model for universities to create educational communities with minimal capital investment in order to reach learners in areas that are underserved by higher education.

Social Capital

Partnerships with journalism organizations and fact-checking initiatives can provide expertise and resources for combating misinformation

[Read more about Scenario 4 in the source material from the Design Summit.](#)





Scenario summary

The group envisioned a future where technology enabled the creation of a neural network bridging all forms of communication across species. In this reality, all species can understand and communicate with each other. While the concept seems outlandish at first glance, the implications are earth-shattering. Humans can no longer claim global supremacy as all species now have a voice.

The group concluded that such an advancement could be a net positive for global sustainability, unleashing ancient wisdom of species existing prior to humans. At interspecies summits, species could co-create policies and make decisions among species, with interspecies relations governed by a Code of Conduct.

An immediate preparation for such a future included further investment in and expansion of innovations in foods, to help a global population shift from animal-based diets, as well as expansion of academic programs and research dedicated to interspecies communication.

Recommended solutions

Policy

Governments must establish protocols for interspecies communication and collaboration in animal-human relationships, informed by input from educators and scientists.

Innovation

Educational institutions can develop communication protocols and language translation software for effective communication with animals. Expansion of transdisciplinary programs in biology, environmental science, communication and AI should be invested in to produce the research and innovation needed to unlock interspecies communication.

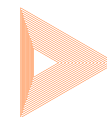
Resource Needs

Funding for research on interspecies communication and investments in wildlife conservation efforts.

Social Capital

Collaboration with ethologists, veterinarians, and animal behavior experts can facilitate knowledge-sharing and collaboration in interspecies relationships.

[Read more about Scenario 5 in the source material from the Design Summit.](#)



SCENARIO 6

Extended reality and historical revisionism



Scenario summary

After reviewing this scenario, the Design Summit group aimed to protect humanity from a future in which extended reality (XR) could be manipulated to advance bias, political agendas and revisions to factual history. Without appropriate safeguards, learners using XR could experience alternate histories designed to appear real and influence beliefs.

To steer humanity toward a future where XR enhances education and is protected by bad actors, the group proposed the creation of a universally adopted International Code of Ethic for XR. This code would serve as a framework that encompasses digital provenance, tackles bias, defines educational objectives and intent of XR, and ensures reliability of the technology and safety for its users.

Such actions would help ensure that the next generation of learners become informed, empathetic and engaged citizens, ready to navigate and shape a world where technology and truth work together.

Recommended solutions

Policy

Educational institutions should adhere to guidelines for historical accuracy and ethical representation in extended reality experiences, enforced through accreditation standards.

Innovation

XR platforms can incorporate peer-review mechanisms and fact-checking algorithms to ensure accuracy and authenticity.

Resource Needs

Investment in digital preservation efforts and partnerships with historians and cultural heritage organizations to verify historical content.

Social Capital

Collaboration with indigenous communities and historically marginalized groups can ensure diverse perspectives are represented in XR experiences.

[Read more about Scenario 6 in the source material from the Design Summit.](#)



SCENARIO 7

Mental wellbeing in the digital age



Scenario summary

The group recognized that while current efforts involving policy changes and technology regulation were important tools to curb digital addiction, societal changes such as cultural practices and human relationships could be more powerful mechanisms to shape human relationships with technology.

One example, the What Works Clearinghouse, would use digital platforms to foster trust and create safe spaces with meaningful human connections. This clearinghouse would be a collaboration between tech industry leaders, local advocacy groups, grassroots organizations, philanthropists, and higher education and K-12 leaders.

Another example, “World Wise,” is a global coalition on culture, balance, and connection. The group would recruit local mentors and create communities of practice that are responsive to the place’s special needs while advocating for new approaches to educating discerning digital citizens.

Recommended solutions

Policy

Governments must allocate resources for comprehensive mental health education and support services in schools, prioritizing early intervention and destigmatization.

Innovation

Digital well-being tools and mindfulness apps can be integrated into educational platforms to promote self-care and stress management.

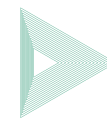
Resource Needs

IFunding for mental health training for educators and the hiring of school counselors and psychologists.

Social Capital

Collaboration with mental health organizations and community-based support networks can provide additional resources and expertise for addressing mental health needs.

[Read more about Scenario 7 in the source material from the Design Summit.](#)



SCENARIO 8

Trauma-informed teaching and learning



Scenario summary

After reviewing this scenario, the Design Summit group began with a reflection of their own educational experiences, as students, as teachers, as administrators, and as parents. They noted that incidents of trauma impacting learners have accelerated in recent years and will only continue during a century marked with global instability and technological revolution.

The group advocated for investment in training for educators and administrators in trauma-informed care and social-emotional learning (SEL) methodologies. They proposed that trauma-informed teaching be deployed locally to address the contextualized needs of learners within each community. Additionally, health and wellness should be seen as core components of cognitive development. Thus, health support systems should be built into traditional models of education as well as into education technologies like apps, wearables, etc. that provide personalized education.

Recommended solutions

Policy

Education ministries should mandate trauma-informed training for educators and incorporate trauma-sensitive practices into school policies and curricula.

Innovation

Online platforms can provide resources and support for trauma-informed teaching strategies, including trauma-sensitive lesson plans and professional development courses.

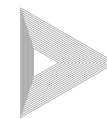
Resource Needs

Funding for trauma-informed training programs and the hiring of trauma specialists to support students and staff. Professional development and lifelong learning opportunities educated on trauma-informed care and teaching should be expanded.

Social Capital

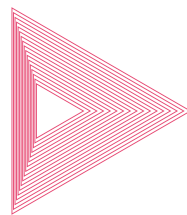
Collaboration with mental health organizations and community-based support networks can provide additional resources and expertise for addressing mental health needs.

[Read more about Scenario 8 in the source material from the Design Summit.](#)



The Next 50 Years

Where to start, and how to keep going



The 50 year itch

Over the course of the next 50 years, participants in the 100 Year EdTech Project envision a consequential period of human history in which technology provides us the tools to transform education into a fully accessible, inclusive and transformative force for all of humanity.

The scenarios we reflected clearly illustrated the challenges ahead of us, but left us wondering where we should start so that we successfully arrive in the future we want.

Regardless of what the next 50 years throws at us, how can we stay motivated to keep going?

We'll stay motivated by adopting a unifying statement of purpose – a manifesto, if you will – that will serve as our guiding framework for how we organize our next steps.

Next, to achieve the ideals set forth by the 100 Year EdTech Project Manifesto, we need to foster deeper futures thinking among educators, policymakers, and learners so that more perspectives join us in imagining future scenarios and planning for them. **Our manifesto is a promise realized through bold policymaking, equitable resource allocation and community collaboration.**

Manifesto

We commit to creating a future where education and technology unleash the potential of every learner to change their lives and the world.

In this pursuit, we embrace innovations that elevate our collective humanity while safeguarding the wellbeing of our environment.

8

Strategies to instill deeper futures thinking in education

We must prepare learners to navigate the future with creativity, resilience and foresight, equipping them with the mindset and skills to shape a more sustainable, inclusive and resilient world.

- 1. Futures Literacy:** As part of curricula, teach students to anticipate, imagine, and navigate future possibilities. This involves exploring scenarios, analyzing trends, and considering alternative futures to develop critical foresight skills.
- 2. Interdisciplinary Collaboration:** Promote collaboration among educators, researchers, and practitioners to tackle future challenges holistically.
- 3. Long-Term Focus:** Prioritize long-term thinking in education, emphasizing sustainability and resilience in decision-making.
- 4. Scenario Planning:** Integrate scenario planning exercises to develop strategic thinking and adaptability in learners.
- 5. Experiential Learning:** Provide real-world immersion through field trips, simulations, and projects to deepen understanding of future concepts.
- 6. Technology Integration:** Use emerging tech like VR, AI, and data analytics to enhance futures thinking, ensuring ethical considerations are addressed.
- 7. Global Contexts:** Expose students to diverse perspectives to foster empathy and understanding of global challenges.
- 8. Lifelong Learning:** Foster a culture of continuous learning to adapt and thrive in an evolving world.

8 Provocations

It is incumbent upon us to remember that we are responsible for the future we create. We are the ones shaping the technology and education systems we introduce to the world. Now and over the next 50 years, we must return to these provocations often and demand from ourselves answers to those hard questions – and find positive examples that light the path forward.

1

Is the technology of the next 50 years **opening access to knowledge** and learning for all, or is it exacerbating unequal access to education?

2

Is the technology of the next 50 years helping us **develop critical thinking** or is it contributing to misinformation and alternate truths?

3

Is the technology of the next 50 years **fostering empathy and understanding** among individuals and communities – or is it a source of friction and division?

4

Is the technology of the next 50 years **supporting equity, inclusion, and fairness**, or is it perpetuating biases and power disparities?



5

Is technology of the next 50 years **creating community and fostering connection**, or is it contributing to social alienation?

6

Is the technology of the next 50 years **promoting positive physical and mental health outcomes**, or is it bolstering the prevalence of disease and poor personal wellbeing?

7

Is the technology of the next 50 years **sustaining our natural resources and influencing us to be better cohabitants of the globe**, or is it perpetuating human supremacy?

8

Is the technology of the next 50 years **accelerating human agency and innovation**, or is it keeping us stuck in outdated models for working and living?

Submit examples of your work that addresses our manifesto for publication in our final report!

Your Turn

Futures Thinking & Strategic Planning at Your Organization

The eight stories functioned as prompts for discussions on the topics, and led to the eventual proposed solutions. How can you use our framework and materials to hold a future-minded strategic planning session for your organization?

The Scenario Design Process: Postcards from the Future

First, how did we do the scripting and design of the eight stories?

We started with the simple conceit that the many learners will be late in their careers in the 2070s. An often used creative writing prompt is to invite a person to write a postcard to their younger self. This invites compassion and understanding for the experiences we had, and our choices, but also suggesting what might have been useful, “if we had only known.”

Another science fiction trope is the time traveler from the future coming back to assist the present, concerned about decisions that could be made to shape a more positive future. We used these two concepts to invent our characters, and why

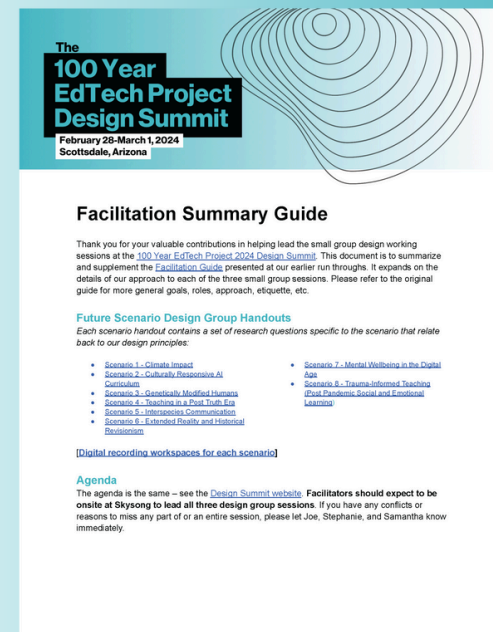
they might be writing to us in the 2020s. The characters addressed a particular part of a dilemma, speaking in active voices, aware that their postcard has real stakes on their own lives and future generations.

StoryCenter team members scripted and edited the movies, using Midjourney images to illustrate the concepts in “futuristic” ways. The movies were shared with all participants prior to the Summit, and they could submit their scenario preferences to designate which design group they’d join at the Design Summit.

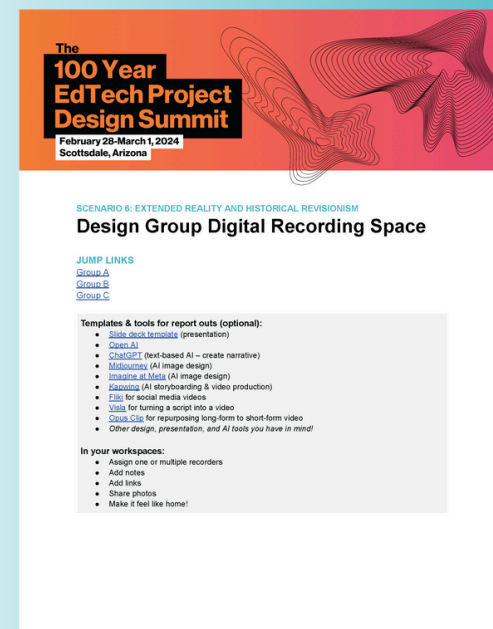
“Re-story:” Facilitating Innovation from the Scenarios

The future scenario movies were meant to spark conversation, but having a group of well-prepared facilitators was critical to the working process. The Summit organizers selected and met with facilitators six weeks in advance of the event, providing virtual training sessions to orient them to our facilitation guide – and get their feedback.

The emphasis in the training was how to take the three 60-100 minute design



[See the [Facilitator Doc: Small Design Group Working Process and sample Digital Recording Space](#)]





sessions and have the participants move from general reactions to the future scenarios, to focus areas for solutions and to completing a proposal to be shared with the larger group.

With ~190 participants expected, we assigned facilitators to each design group of 15-20 participants. Some scenarios broke into two to three smaller groups, while others maintained one larger group.

Creating Intentional Spaces

The Design Summit was presented as an invitation to invent an ideal future for education. From the beginning, where we invited participants to call in the mentors who inspired them, on our Tribute Wall, to our closing ritual of sharing commitment to change in the coming year on a seed paper slip of paper, then hung from our Promise Tree (now planted in Santa Fe, New Mexico), we wanted people to treat the event as a transformational experience.

Inspired by the learner and subject matter expert panels, the design groups were meant to extend that sense of purpose and possibility. Participants were reminded of basic ground rules for a respectful and productive process, and the facilitators mediated between the inevitable differing visions and ideas that emerged.

The facilitators were asked to make participation as inclusive and safe as possible, steering discussions toward the final actionable proposal, while allowing for

as much creative exploration as possible. In some groups, that meant a two- or three-person pairing to give people a chance to dig into a solution and present it back to the full group; in others it was moving the larger, full group discussion toward a close-to-consensus proposal.

All participants had access to documents that covered the design process, and google documents and workspaces for ideas and notes to be recorded throughout each part of the process.

Hosting a Design Summit: Finessing Facilities

Skysong - The ASU Scottsdale Innovation Center gave participants many opportunities for organizing the event, from a flexible main conference room to ample additional venues indoors and outdoors for the small design groups sessions.

Get to know the facilities, and consider the ways you can contextualize the discussions with the full group. For example, this would include holding opening and closing plenary sessions.

If hosting strategic planning sessions in person, there needs to be ample spaces for the small design groups, with sound separation and ways for facilitators to create pairs or subgroups to work as well. You may even consider what virtual spaces could look like to extend the work and outcomes across geographic boundaries.



Recommended Readings & Citations

Books

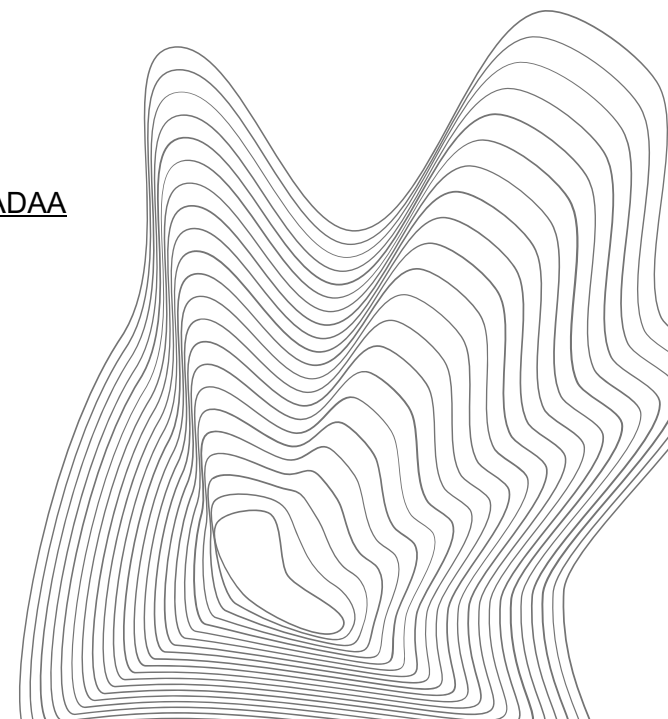
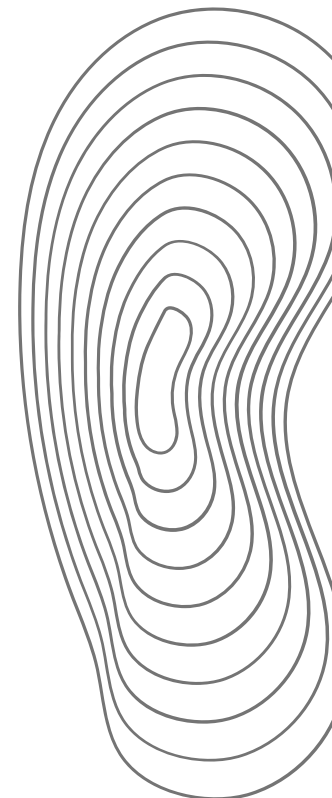
- [The Ministry for the Future](#) by Kim Stanley Robinson
- [The Story of More: How We Got to Climate Change and Where to Go from Here](#) by Hope Jahren
- [AI 2041: Ten Visions for Our Future](#) by Kai-Fu Lee and Chen Qiufan
- [The Dawn of Everything: A New History of Humanity](#) by David Graeber and David Wengrow
- [Homo Deus: A Brief History of Tomorrow](#) by Yuval Noah Harari
- [How the World Really Works: The Science Behind How We Got Here and Where We're Going](#) by Vaclav Smil
- [Futureproof: 9 Rules for Humans in the Age of Automation](#) by Kevin Roose
- [The Nature of the Future: Dispatches from the Socialstructured World](#) by Marina Gorbis

Articles

- [Horizon Reports](#) (various)
- [Visions for Democracy: A summary report of the IFTF + NDI expert workshops on the futures of democracy.](#)
- [What Will Schools Look like in 2050](#)
- [Populace Research](#)
- [Populace Insights: Purpose of Education Index](#)
- [Study: Misunderstanding the American Dream](#)
- [13 Trauma-Informed Teaching Strategies for Educators Today_| Member Learning Community.](#)
- [How to Prevent Trauma From Becoming PTSD | Anxiety and Depression Association of America, ADAA](#)

Resources

- [Watch a recap of the June 2023 Inaugural Design Committee sessions](#)
- [Download the Interim Report from the July 2023 kick-off](#)
- [ShapingEDU: What informs and inspires us](#)



Acknowledgements

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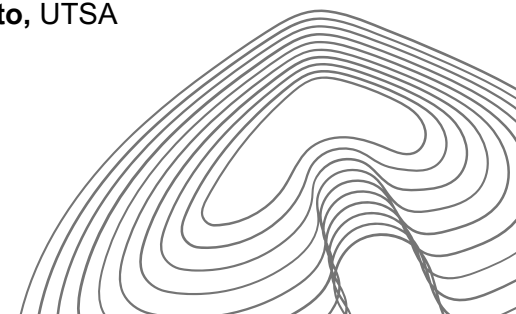
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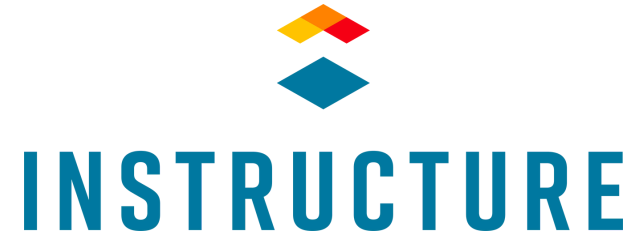
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Get Your Influential Work Featured

Submit any projects, programs, initiatives, or courses that address any of the 100 Year EdTech Project's 2024 Future Scenarios and Provocations!

The final report will be published In May 2024 and will feature the most promising work in education and technology with implications for the next 50 years.



“We must prepare learners to navigate the future with creativity, resilience and foresight, equipping them with the mindset and skills to shape a more sustainable, inclusive and resilient world.”

