Are we ready for a leap forward in education?
Education transforms and saves lives

So it’s all the more devastating that education has been hit so hard by the COVID-19 pandemic. One billion children and young people have had their learning disrupted. Some of them will never return to school — particularly those already marginalized through poverty, gender, or disability.

But from this difficult place, green shoots are starting to appear — green shoots we can nurture. We’ve done it before: Article 26 of the Universal Declaration of Human Rights — “everyone has the right to education” — was embraced by survivors of colonization, the 1918 pandemic, and two world wars. In the 1940s, the drive to recover ushered in a period of tremendous social, cultural and economic progress. This time round, the scale of what we’ve lost could once again spur policymakers, philanthropists, and educators to create widespread change.

As the world rebuilds, we have an opportunity to do more than restore educational systems. We can renew them. And, by doing so, build a better world.
In this report, we ask:

What will schools of the future look like?
How can we prepare schools for that future?
What we can do now

Education must be fit to fight a new era of existential challenges

Eric Hanushek and his colleagues have shown a strong correlation between better schools and economic growth. And the OECD has used data from its globally recognized PISA assessment program to map out what they call the “stunning economic and social benefits” of making sure every student leaves school with basic literacy and numeracy skills.

Education systems must prepare children and young people to meet what’s coming: the climate is changing, the job and technology landscape is shifting, and in some areas, education systems are struggling to put fair access in place for all.

Done right, education could be the balm that heals an unequal world — one that so often fractures along economic, environmental, and social fault lines. After all, better education systems don't just nurture students but future leaders — of a more inclusive, sustainable, and peaceful world.
What will schools of the future look like?

We’ve all heard a lot about ‘schools of the future’ and ‘21st century skills’. This reflects a widespread belief that the model of schooling that served the 20th century won’t fully serve our 21st century emphasis on STEM, empathy, growth mindsets, critical thinking, leadership, innovation, and expert thinking. But what could replace it? Here’s what research suggests.

1. Teachers and school leaders will drive our success

Neuroscience, early childhood development, educational psychology, economics, and science education research agrees: teachers and school leaders are the ones who’ll improve learning. Their vision, relationships, creativity, and initiative will reshape the system.

But we need a more scientific approach to build evidence on teacher effectiveness. And to give teachers the right access to research, or training in how to use it. We are, for example, learning from the CU Science Education Initiative about teaching science, as a science.

Teach for All has shown us that educational systems also need a new approach to leadership to make them more inclusive. Their network develops the skills in classrooms and communities to unlock every child’s potential.

2. Educators will benefit from a new, science-based focus on early learning

Infancy and early years are an intense period of development. Neuroscience is showing us how the infant brain develops, giving insights into how children learn, and suggesting good educational practices. “The early brain is born to learn, ready to learn, and when certain conditions are met, kids can soar,” says Patricia Kuhl, co-director of the University of Washington Institute for Learning and Brain Science. She shares some of the findings about the longer-term impact in a short documentary.

What we know is that children benefit immensely from learning environments that are joyful, social and encourage curiosity, inquisitiveness, and agency. We can see it in BRAC IED’s Early Childhood Development and Centre for Play in Bangladesh, and in China’s New Education Experiment.

Research is also helping us spot neurodiverse learners earlier, and build education systems that work for them.
3. We’ll rethink how students learn

For too long, children’s learning has been harmed by an unjustified belief in innate intelligence and fixed talent — and very narrow measures of talent at that. But research into growth mindset suggests intellectual abilities can be developed with persistence and hard work.

Opportunities are too often doled out through testing, based on a flawed assumption that tests can measure a child’s capacity to succeed. It’s time we measured what matters: not just academic achievements but socio-emotional skills, problem-solving, teamwork, mindsets, and citizenship.

Student-driven learning is also taking off — where learners develop agency and expertise and teachers foster the social interaction that drives motivation and curiosity. Fundación Escuela Nueva calls it ‘integral education for life’: the organization promotes active, co-operative, and personalized teaching and learning methods.

4. Digital learning will keep growing rapidly

Online learning can both enhance education and make it easier to access. Capabilities are improving by leaps and bounds, bringing new digital tools to that can support teachers and school systems. Already reaching millions, learning platforms such as Khan Academy, edX, and PhET Interactive Simulations exploded in popularity as schools closed during the pandemic.

In the future, blended learning is likely to become the norm: bringing together the best of what works well face-to-face, while leaping institutional, social, economic, or geographic barriers online. Students will also earn credentials from a variety of sources, as learning itself becomes self-paced, social, and active. Technology will allow children and teens to share their cultural learning practices with peers across countries and widen their perspectives.

To make this a reality, schools will need to begin now to invest in both bricks and mortar and bits and bytes. They can take some advice on striking a balance from Sal Khan, who also founded the Khan Lab School, which offers in-person teaching and learning.

And of course, we’ll need to overcome the digital divide, with fair, universal access to the internet and digital commons.

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How can we prepare schools for that future?

1. We need to take a scientific approach
   We get better ideas about teaching and learning when we’re methodical — and better science when fields like economics, neuroscience, and education overlap.

   Measurement and analysis help educators keep improving — trying out different ideas and taking forward what works best. Carl Wieman’s research into university teaching shows how we now have ‘established expertise’ that points the way to consistently better learning outcomes — but we’re not using enough of it yet.

2. We must get everyone gathering and using evidence
   Teachers should collect evidence and use it to tailor their lessons; students should learn to experiment and practice making decisions. We can sum this mindset up as ‘discovery’; we see organizations succeed when they use it to explore challenges and define solutions.

   Larry Hedges defines — and proposes answers to — the challenges we face in building useable knowledge. Thomas Kane and his colleagues have seen positive results from swapping traditional in-person teaching observations with video captured by teachers. And the STEPP Center (or Statistics for Evidence-Based Policy and Practice) is building methods for collecting better quality evidence and using it more effectively.

“There should be greater access to learning for those marginalized in current systems by poverty, gender, geography, ethnicity, and disability. Education strengthens the voice of these groups.”
3. We must make education fairer and more accessible

It’s the right thing to do — and it’s the only way we’ll see true innovation. Improvements should reach people who need it most. Specifically, there should be greater access to learning for those marginalized in current systems by poverty, gender, geography, ethnicity, and disability. Education strengthens the voice of these groups.

Projects across the globe have shown convincingly that driving equity and taking a human-centered approach can create great change. In sub-Saharan Africa, the Campaign for Female Education (CAMFED) helps girls overcome social and financial barriers to stay in education. A recent evaluation from the University of Cambridge showed that every $100 CAMFED invested in a girl for a year, moved every girl and boy at her school ahead in their education by two years.

The Bangladesh-based Asian University for Women has seen 2,000 graduates return to their communities to make a positive impact, or go on to further education. MindsetWorks offers programs, training, and resources to unlock potential in all students. And BRAC education has developed a low-cost, scalable schooling model that offers a high quality of education for all. All of these programs make it their purpose to help marginalized young people succeed, and in doing so show us how education systems can change for the better, to everyone’s benefit.
4. We should look beyond governments
One delegate to the Jomtien conference on Education for All quipped: “education is so important; you can't leave it only in the hands of government.”
Many governments may need to give up some powers to let new ideas and reform flourish. Non-state actors are critical to delivering services and sustaining innovation — whether they’re community partners, advocacy groups, or new kinds of service providers.
BRAC and Fundación Escuela Nueva both created adaptable, student-centered models for teaching and learning, which can work everywhere — from urban classrooms to remote village schoolrooms with little or no connectivity. Teach for All’s global network of partners spans 60 countries over six continents, infusing systems with new approaches to teaching and leadership.

5. We need to work together to turn innovations into lasting systemic change
Several organizations associated with the Yidan Prize Foundation are changing systems at scale. They’re cultivating a generation of leaders committed to improving education. They’re encouraging those leaders to work as teachers, administrators, or advocates for education in whatever career path they choose.
As CAMFED explains, “we treat everyone we work with as an individual. But we do not support anyone in isolation”. The organization’s model takes in the whole structure: they don’t just pay school fees, but supply books, uniforms, and sanitary products. And their learner guides — scholars who come back to volunteer their time to keep girls in school — offer social and emotional support. Over time, a modest number of scholarships turned into a movement across five countries.
Alumni from organizations such as Fundación Escuela Nueva in Colombia and the New Education Initiative in China have filled key posts in government, bringing new ways of framing challenges and solutions into the mainstream. Graduates from the Asian University for Women bring a fresh perspective wherever they go — from corporate multinationals, to shaping global non-profits such as Save the Children and UNESCO. Teach for All alumni form an influential world-wide network.

From another perspective, technology experts are opening up a very wide space to reimagine how we organize schools and systems. And researchers are spurring shifts in policy by giving better quality evidence about what works, where and why.
What we can do now

Most of the children in the world are growing up in the most resource-constrained countries, where school systems are stretched beyond capacity. At the same time, globalization has bound economies, environments, and societies together, so their education should be everyone’s concern.

Poorer countries make the effort, but their resource base is small and unstable relative to the needs of rapidly expanding education systems. Wealthy countries and international organizations have the means to help, but need political will to do so.

It’s particularly important to make sure that children get off to a good start, in a robust early learning environment with a smooth transition to formal schooling. Formal schooling that has high-performing teachers, makes the most of blended learning, and empowers learners. In a system that supports each child individually, and is always open to constructive change.

That means understanding what new things to try, when, and how. Our future institutions can be set up to test new approaches and gather a wealth of scientifically valid knowledge.

Our society needs renewal, and education should be at the center: shaping a generation of locally rooted leaders who’ll build a more inclusive, peaceful and sustainable world. To do that, we’ll need to foster new levels of leadership at every level of education systems around the world. We’ll need to build global networks and give them spaces to share knowledge and learn from each other.

Our Council of Luminaries seeks to improve international cooperation in education. Members are keen to join others interested in acting as stewards of change, by asking critical questions, sharing new evidence, and experimenting with new models.

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What to read next

Research and articles:
Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation
Universal basic skills: what countries stand to gain
Research to practice
Does quality early childhood education lead to more successful lives as adults?
What is neuroscience?
Seven takeaways from the National Academy of Sciences report on early childhood education
Learning difficulties: future challenges
Mental capital and wellbeing: making the most of ourselves in the 21st century
A national experiment reveals where a growth mindset improves achievement
Making the best of virtual learning: some advice from the founder of Khan Academy
Expertise in university teaching & the implications for teaching effectiveness, evaluation & training

Organizations and programs:
Asian University for Women
BRAC
CAMFED
edX
Fundación Escuela Nueva
Khan Academy
MindsetWorks
New Education Experiment
PhET Interactive Simulations
Teach for All
STEPP Center
“The Yidan Council of Luminaries is coming together to use its expertise and influence to tackle education’s most pressing problems.”
About the Yidan Council of Luminaries

In December 2020, we launched our council with 16 of the world’s leading lights in education research and practice.

They’re researchers, educators, neuroscientists, psychologists, economists, statisticians, and innovators — experts from all over the world, working together to build a better one through education.

These are people who have built school systems for marginalized communities from scratch; who have uncovered learning patterns in the brain; who have created digital platforms to open access to degree-level learning.

They’ve improved education for billions of people across the world. And now they’re coming together to use their expertise and influence to tackle education’s most pressing problems.

They’ll do that by:

• **Working together on real world problems.** Like using new evidence from the science of human development in learning programs, or collaborating to improve the quality of evidence from laureate and luminary projects.

• **Engaging the public in education’s newest ideas and research** — which calls for luminaries to share their own work with wider audiences.

• **Speaking with a collective voice on issues that matter.** For example, what schools of the future will look like, connectivity, the role of technology, and teacher development.
Members of the Yidan Council of Luminaries

Sir Fazle Hasan Abed KCMG, Founder and Chair Emeritus, BRAC (in memoriam)*

Professor Carol Dweck, Lewis and Virginia Eaton Professor of Psychology, Stanford University

Professor Anant Agarwal, Founder and CEO, edX

Professor Usha Goswami, Professor of Cognitive Developmental Neuroscience, University of Cambridge

Mr Kamal Ahmad, Founder, Asian University for Women

Professor Eric A. Hanushek, Paul and Jean Hanna Senior Fellow, Hoover Institute of Stanford University

Ms Vicky Colbert, Founder and Director, Fundación Escuela Nueva (FEN)

Professor Larry Hedges, Chairman of the Department of Statistics, Northwestern University

* Represented by Dr Muhammad Musa, Executive Director, BRAC International and Dr Erum Mariam, Executive Director, BRAC Institute of Educational Development.
“Better education systems don’t just nurture students but future leaders — of a more inclusive, sustainable, and peaceful world.”
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