TOWARDS GLOBAL LEARNING GOALS

BE KIND, CURIOUS AND BRAVE

A SURVIVAL GUIDE TO THE 21ST CENTURY

Photo credit: Their World.

We need a revolution in how and what humans learn.

CONTENTS

1 Foreword

"Ensuring the next generation have the opportunity of education is the great civil rights issue of our time. We have made great progress in identifying new ways of financing the effort, and bringing together new coalitions to deliver it. This excellent report will help pioneers, educators, universities, teachers, parents, learners and international organisations take on the obstacles to whole child development. Future generations will need a new blend of knowledge, skills and character to thrive. This work points the way"

Gordon Brown, UN Envoy for Global Education

"Having dropped out of school to complete my studies, this work should inspire others to consider what they really need to learn in order to thrive. Young people are increasingly taking control of their future. With the right changes, they can prepare for the world ahead".

Elsa Cohen, writer and learner[1]

"The work described in this report plays a vital role in bringing together learning pioneers, thinkers and activists to reimagine how to increase the equality and quality of education opportunity"

John Sexton, President Emeritus, New York University

"Technology can be a gamechanger for learners. But innovators need to understand how and where to engage. This report points the way to positive disruption that supports the education of the head, hand and heart that the next generation need to thrive"

Loubna Hadid, blockchain entrepreneur

1 At 16, Elsa chose to take control of her own education by homeschooling. This allowed her to not only graduate with stellar results but to gain experience in startups and through her own projects. She's writing a book to inspire more students to hack their education.

2 Introduction

'We lean forward to the next crazy venture beneath the skies'. Jack Kerouac

For me, a recovering Ambassador, this work grew out of **three** experiences.

1 First, the rollercoaster of being a parent of two boys, and agonising over what they needed to know to live a good life. What were the ideas and values that I had been luckiest to inherit from my parents and ancestors? Every father and mother wrestles with the same questions as they seek to be the bridge, the story bearer, between the past and future of their family.

2 Second, my experience in the Middle East. I saw close up what happens when you forget that what brings us together as humans is stronger than what divides us. And I saw these same arguments being played out in the West, and a friend dying for them, after a century in which we thought we had worked out the answers. "The burnt fool's bandaged finger goes wabbling back to the fire."[2]

2 'The Gods of Copybook Headings›, 1919, Kipling: http://www.kiplingsociety.co.uk/poems_copybook.htm
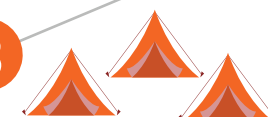
3 Thirdly, from my experience working on the Syrian refugee crisis. Wherever you stand on who is responsible for the industrial slaughter of Syria, we can surely agree that the million kids out of school should not pay the price. Yet we found that as they moved between countries seeking refuge they were going through multiple education systems, each time losing time and hope. How was it that in a world of such daring innovation and genuine compassion it was so hard to deliver such a basic right?

So, over two years, we have investigated the future of learning. The journey has taken us from our base at New York University Abu Dhabi to the halls of Oxford University, from the British Library to the Mumbai innovators seeking to digitalise all educational content, and from the refugee camps of the Bekaa Valley to the new frontier startups of Silicon Valley. It has taken us from Nairobi to Singapore to Oslo to Abu Dhabi to San Francisco to Geneva to Canberra, to meet the restless pioneers of the next learning awakening. It has led us from podcast and research interviews to brainstorming sessions on the future of the university to hackathons with students on the curriculum they want.
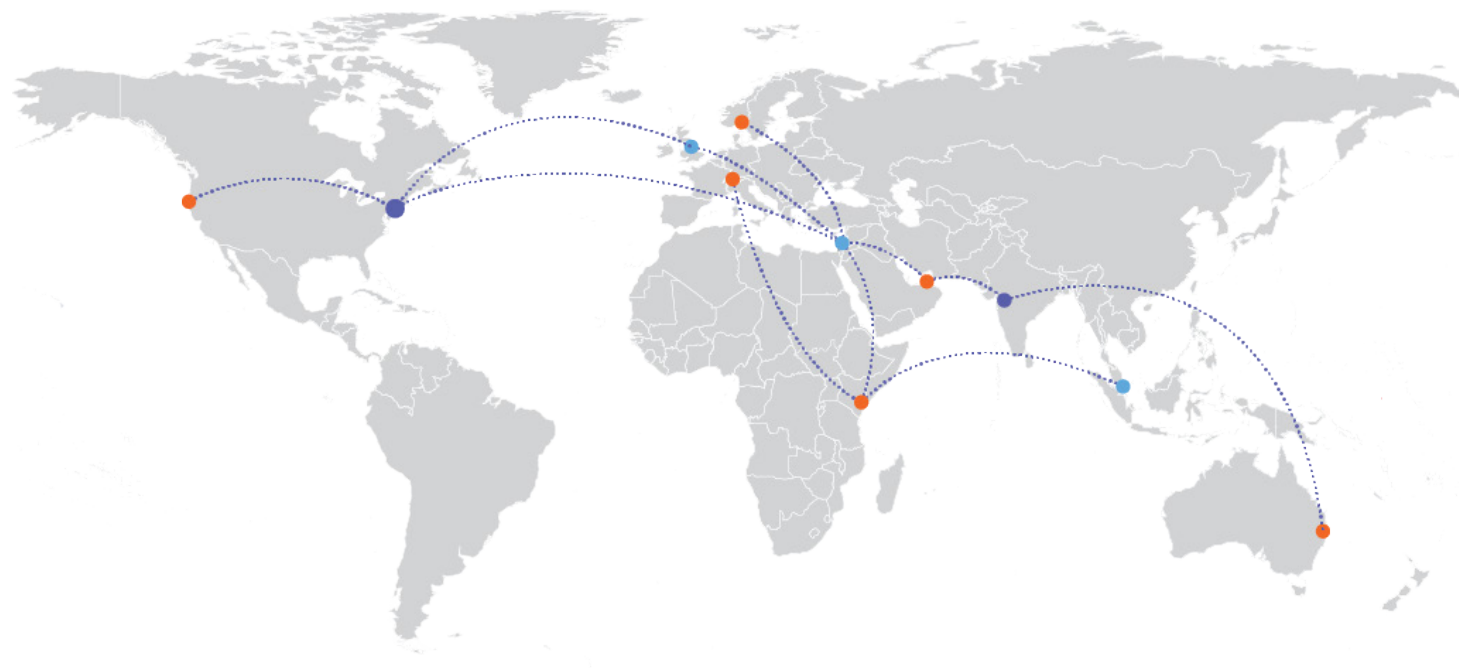
Along the way, we have learnt about learning.

The bad news is that global education isn't working well enough. National systems don't prioritise global citizenship, character or skills. Most young people learn the wrong things in the wrong way. And 75 million of them aren't in formal education at all. All this at a time of unprecedented technological change and movement of people, and when what it means to be human is in flux.

The good news is that the digital economy will bring extraordinary opportunities to learn, innovate and create together. Global citizens will gain greater control of their own lives, including their education. Learning in the future will be more collaborative, more digital and more human. The internet can liberate humanity's ability to reason together.

So we argue that we need a revolution in *how and what humans learn*. And that the foundation for this should be new global learning goals of the head, hand and heart.
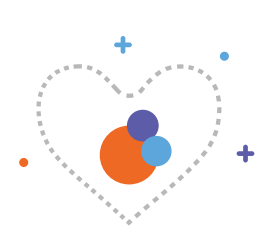
Of the head: passing on the essential wisdom of centuries. How have humans developed, from cave paintings to driverless cars? How have we learnt to live together? And what do we need to understand about the planet we inhabit?

Of the hand: developing the skills needed to thrive in the 21st century. How can we learn, and keep on learning? How can we adapt to a world in which industries will disappear, and where we will need to work more closely together across cultures and societies? How can we manage our mental and physical health, and organise our lives?

And of the heart: how can we ensure that future generations are kinder, more curious and braver than us?

These are the questions that education needs to answer. Only then can we meet the challenge of the 21st century: how to create more winners from globalisation and technological change, while better protecting those left behind.

At its core, we discovered that this is a challenge of politics not education. We need to create new coalitions for change, and give a voice and a platform to those who can shape and win the arguments. These include pioneering educators and governments; the businesses that want to see people better equipped with the right skills; the parents who want their children to thrive. And most importantly young people themselves, who will lead the next learning Renaissance.

Having spent so much time with those on the education frontline, I am convinced that we are on the cusp of a great leap forward in not just what we learn, but how and why we learn. If we get this right, global learning goals will create greater equality of opportunity and unleash massive potential. With the right opportunity, the next Marie Curie, Albert Einstein or Bill Gates can move humanity forward. With the right opportunity, technology will work for our children, rather than our children work for technology.

We navigated previous periods of tumultuous change such as the agricultural and industrial revolutions not just through mastery of the new tools, but through a new mindset. I believe we can preserve and share the wisdom and knowledge of millennia, while giving learners the skills to thrive, adapt, learn, create, invent, coexist; and the character that will equip them as citizens of everywhere.

We are all educators, and we are all learners. We all need more humans to learn the right things in the right way.

I hope that you will enjoy this contribution, and that it will spark ideas, partnerships and action.

Tom Fletcher CMG
TGLG Project Director

3   Executive Summary

This report describes the journey we took to try to understand how we can help the next generation learn the right things in the right way.

We begin by setting out why change is needed, based on interviews with thinkers, educators, learners and policy makers on every continent. Those conversations left us staggered that reform has been so difficult, so we wanted to look at the politics around education. What are the vested interests that hold change back?

It is always easier to identify problems than solutions. So we then turned our efforts to seeking out the islands of opportunity. Where are the greatest examples of innovation, creativity and courage in the sector? We found and highlighted many in our reports, but realised that a major challenge was the lack of a coherent set of ideas around which to gather. So we identified in Part Two the ways to bring together the efforts going in so many sectors, so that the sum can be greater than the parts.

Part Three is our best guess at what ideas could be a basis for the coalitions needed to deliver change. We set out nine global learning goals, across knowledge (head), skills (hand) and character (heart). We don't pretend these are the best answer - they are designed to provoke debate, reform, improvement.

Throughout, we highlight some of the champions we have met who will help deliver the transformation of learning. They will write the next chapters. We close by signposting how you can help.

PART 1

An Education Awakening: Why?

4 Why We Need a Learning Revolution

'Education is the kindling of a flame, not the filling of a vessel.' Socrates
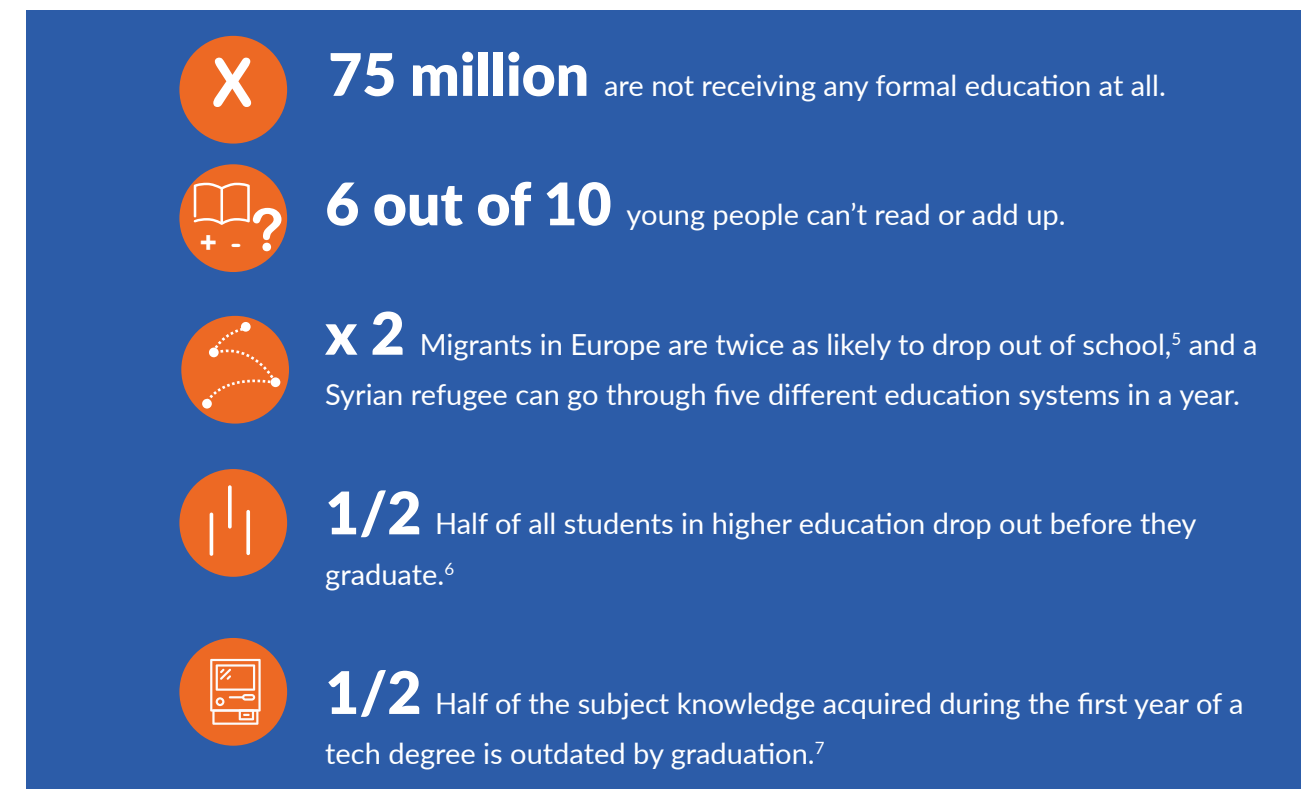
There is a story of the lost driver asking for directions. A passer by shrugs, "If I were you, I wouldn't start from here." We have asked hundreds of experts, educators and pioneers three big questions. Are humans learning the right things? Are they learning them in the right way? And if not, why not? The answers are sobering.

We are seeing the impact on politics and society of three striking trends: a rapid rise of mistrust in traditional institutions (including the media, businesses and governments); growing economic inequality leading to an age of people on the move; and a more existential uncertainty about the future created by technology and globalisation.

Technology will also bring new threats. States, ideas and industries will go out of business. Two thirds of young people will work in jobs that do not yet exist. Over five million jobs will disappear by 2020. The nature of the work we will do in the near future could be an even bigger driver of instability than climate change.

With previous paradigm shifts we had decades or even centuries to adapt. The pace of the new transformations means that we won't have that luxury this time. Managing this is the greatest challenge of our era. Yet we are in danger of being overwhelmed. We have the tools, but we are not using them to their potential.

Too often we fail to spark the delight and magic of learning. What is taught is not connected to the demands of the future economy and society. We stubbornly force feed kids what we ourselves learnt, without recognising how different their lives will be. Content and assessment persistently focus on classic academic knowledge rather than character and skills.[3] States control education systems to reinforce existing hierarchies rather than help young people build networks of global citizens. Most children in the world are taught in 'factory schools', churning out pupils.[4]

75 million are not receiving any formal education at all.

6 out of 10 young people can't read or add up.

x 2 Migrants in Europe are twice as likely to drop out of school,[5] and a Syrian refugee can go through five different education systems in a year.

1/2 Half of all students in higher education drop out before they graduate.[6]

1/2 Half of the subject knowledge acquired during the first year of a tech degree is outdated by graduation.[7]

This has consequences. Based on the current trajectory, a generation on the move will not be equipped with the skills they need.[8] Polarisation, extremism, inequality, drift, intolerance and distrust will increase. Fail to educate people about the wisdom of coexistence and we will get more wall builders and warmakers. Global Cooperation (1948-2016), RIP.

Yet internet penetration allows us to imagine for the first time that young people anywhere could access the best possible education resources. The popularity of MOOCs is testament to this: enrollment has increased 60% a year since 2014.[9]

But for new ways of educating to flourish, we need global learning goals. While the citizens of Spain squabbled, Columbus sailed quietly off in 1492 to find a new world. Now as then, there are ingenious humans quietly discovering the ideas that we do not yet understand but will be unable to live without. Steps forward traditionally depended on few genius outliers. But the new enlightenment will instead be broader based than any before, drawing on the talent of those currently denied opportunity. Only that collaboration can generate the creativity required not just for survival, but for renewal.

Change is coming ... even if we wouldn't have started from here.[10]

3 http://www.cbi.org.uk/news/education-is-more-than-knowledge-alone/
4 Prince EA video & 'Alike' animated short film directed by Daniel Martínez Lara & Rafa Cano Méndez

5 http://uis.unesco.org/sites/default/files/documents/fs-46more-than-half-children-not-learning-en2017-.pdf
6 https://thinkprogress.org/study-nearly-half-of-americas-college-students-drop-out-before-receiving-a-degree-68867634fa5e
7 http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf
8 https://gbc-education.org/wp-content/uploads/11/2018/Deloitte_Preparing-tomorrows-workforce-for4-IR-revised08.11-.pdf
9 http://monitor.icef.com/2017/01/global-mooc-enrolment-jumped-last-year/
10 https://unesdoc.unesco.org/ark:/48223/pf0000234807

PART 2

An Education Awakening: How?

5 From Ferment to Fusion

'Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it›s the only thing that ever has.' Margaret Mead

You only have to look at how the average classroom has changed over 200 years compared to the average surgery to see how hard educational reform is.

Why? The interests of education's stakeholders - governments, schools, colleges and universities, employers, teachers, parents and learners themselves - are not aligned. Too often, education is conceived, designed and delivered as a mechanism to reinforce national identity, solidarity and interests, and as a driver for human capital and a capable labour force. The result is that it reproduces social and economic inequality.

At its heart, education is about passing on the best of what we have learnt over millennia, so that the next generation is equipped to tackle the challenges of the future. It should unlock opportunity.

Many look at the global education landscape and conclude that reform is simply too cumbersome and complex a challenge. They are right to be daunted, and we have at times also despaired. There are a bewildering number of competing, and often conflicting, visions for what education should become, how it should be designed, where and how it should be delivered, and how and by whom it should be accredited and measured. Disruption too often risks leading to the Westernisation, Uberisation or 'McDonaldisation' of education.[11]

The reality is that there are already quiet revolutions taking place in different parts of the sector. Our work has highlighted hundreds of inspirational initiatives.[12]

We conclude from those that meaningful change will not be top down. Instead it requires a connecting of the dots. The Oxford professor battling to create space on the curriculum for a global view of history can take heart from the art teacher[13] battling to show that mastering creativity is not just an after school painting club. The headteacher[14] convincing teachers and parents that mindfulness helps academic success can take heart from the tech entrepreneur[15] testing how play develops brain power. The business leader frustrated that his employees aren't equipped with the right problem solving skills can take heart from the YouTube campaigner making popular videos on

why education isn't working.[16] The UN official[17] exhausted by trying to make it easier for refugees to pass through multiple education systems[18] can take heart from the students demanding they be taught global competencies rather than the list of wars their country won.

"Our natural instincts are to cooperate and to learn from each other; I am much more interested in how people exchange ideas and goods with each other than in glorifying warfare and confrontation, and seeing what happens when men (it always is the men, by the way) fight each other for power and status." *Peter Frankopan, author of 'The Silk Roads.'[19]*

'My job as a parent is not to force [our child] down the world of coding... it's to demonstrate all the ways that he can express himself', *Daniel Hirschmann, co-founder of Tech Will Save Us.*

Our aspiration has been is to highlight these talismanic examples; to help to connect them; to expose the obstacles they face (collectively, by sector and individually) and to make practical recommendations that will liberate them to drive the change that is needed.

We can also take inspiration from previous leaps forward in education quality, and in political reform. Historically, real change often started with individual pioneer educators, the 'crazy ones'.[20] Invention and innovation that challenged dominant models fermented and formalised, and islands of ingenuity gradually emerged, and joined others. Political leaders saw the potential, and drove for structural reform, usually against significant vested interests. From universal literacy within individual nations to the modern campaign to make global poverty history, education drove the politics, and the politics drove education. States adopted innovative ideas when they saw they worked.

We believe that the points of fermentation, intersection and fusion that we have highlighted and developed show where progress can be made. And we find growing recognition within different parts of the education ecosystem that there is a need to work together in new ways. To build coalitions and ensure that talismanic education pioneers are heard, we need to create the right environment for innovation and disruption, consistently state the case for change, and enlist allies to help.

But in order to connect the dots, you need some defining principles, around which to coalesce, debate, organise and build a coalition for greater equality of opportunity.[21]

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11 https://globallearninggoals.com/wp-content/uploads/06/2018/From-Ferment-to-Fusion-Towards-Global-Learning-Goals.pdf
12 https://globallearninggoals.com/wp-content/uploads/01/2019/Islands-of-Opportunity-Towards-Global-Learning-Goals-singepageversion.pdf
13 »The skills, the journey, the resistance, the resilience« - @Andriazaf at #FedSummit18 shares a teacher›s perspective on building the creative workforce of tomorrow
14 Tatler Schools Live 2015 - Sir Anthony Seldon›s lecture on What an Education Should Be
15 Tech Will Save Us https://theirworld.org/better-angels/learning-in-the-digital-age-with-tom-fletcher-episode3-

16 «I just sued the school system», a video by Prince EA with 14 million views. See also the Importance of learning how to fail: https://hbr.org/11/2017/how-coca-cola-netflix-and-amazon-learn-from-failure
17 https://www.unhcr.org/news/latest/5/9/2018bad4e154/international-community-unites-bolster-education-opportunities-refugees.html
18 https://www.theguardian.com/education/2018/feb/13/sweden-school-britain-education-young-refugees
19 Peter Frankopan, interview with Good Times magazine
20 https://www.youtube.com/watch?v=4fcb8eu20SQ
21 https://unesdoc.unesco.org/ark:/48223/pf0000242996

A new Declaration of Principles on Global Education Reform. Nothing fancy, but some basic, inclusive guidelines. Our suggestions include:

Declaration of Principles on Global Education Reform

The purpose of education is work, citizenship and life, not just productivity.

Most humans are learning the wrong things in the wrong way.

We don't need a global curriculum, but we do need global learning goals.

Teaching and assessing skills and character matters as much as knowledge.

You need a global perspective to thrive in the 21st century, but this should not be at the expense of local awareness.

You can be both a global citizen and a citizen of somewhere.

We should spend less time learning about conflicts, and more on how we coexist.

Education should last a lifetime.

We need to study how to manage our health, emotions, finances, environment.

Tech will be great leap forward in not just what we learn, but how and why we learn.

Individuals, especially young people, should drive the learning revolution.

The changing nature of global politics - from the empowerment of individuals to the decline of trust in traditional institutions to the nationalist trends that have grown since the 2008 crash - means that we cannot simply wait for progressive governments to react and lead, certainly not in a way that is sufficiently agile. Neither can a UN system that is under-resourced and under attack.

So we also need a new coalition of innovators, pioneers and educators, working together towards global learning goals of the head, hand and heart. For campaigners and activists, we can show that education is the key to unlocking all the more attention grabbing campaigns.

To focus the effort, we see ten challenges which need to be turned into opportunities:

1. How can we ensure talismanic education pioneers are heard?

2. How can pioneer governments generate peer pressure for change?

3. How can business support a second learning renaissance?

4. How can the global architecture create the right environment for reform?

5. Where can we agree global learning goals?

6. How can universities become part of the solution, not part of the problem?

7. How can we get parent support for passing on skills to thrive, not just passing exams?

8. How can young people move from consumers to producers of their education?

9. How do you measure - fairly - the new skills and competences required to thrive?

10. How can technology level up educational opportunity rather than increase inequality?

The following chapters look at these challenges in more detail.

This is an exciting, fluid, and dynamic era of ferment in the movement to develop social and emotional learning, to find ways to offer better education to more people, and to reimagine, rebundle and reconfigure the education landscape. In search of the ideas for how to do this, our journey took us next to California.

6 The Challenge and Opportunity of Technology

Silicon Valley is founded and sustained on the idea that it is on the right side of history. But - like governments, banks, the media and so many more - it now finds itself on the wrong side of the trust deficit. During our 2018 visits to see the best education innovations, we found great confidence that it will generate the ideas that take humanity forward. But an increasing awareness of the malign political impact that technology can have, which now places the entire ecosystem on the back foot.

This creates a great opportunity[22] for new business models to emerge that place social value more consistently and explicitly at their core. And for tech companies to engage other actors on genuinely collaborative problem solving, rather than simply disruption.[23] This is the right moment to be pitching a new coalition approach to education.

For most people in the Tech world, the arguments over the need for more social and emotional learning are already won. We visited the schools they are sending their kids to - problem solving, team working, critical thinking and creativity are prioritised over remembering things or passing classic exams.

Yet technology has not transformed education in the way it has changed other fields. Digital tools have been introduced in the classroom,[24] but application is neither equitable nor consistent. While there are many outstanding examples[25] of technology transforming how learning happens, these tend to be limited in scope and scalability.[26] Rather than taking advantage of the innovative methodologies that technology allows, we are simply digitising the teacher-centric model of traditional classrooms rather than - for example - rebuilding it around the collaborative environment of gaming virtual worlds.

'But what we might see in education is a scenario that we are wittingly hinting at in terms of a global curriculum, which is the potential for saying ok we've got self-driving cars couldn't we have a self-driving classroom. And if you say it that quickly it sounds great, I mean I can imagine a lot of people at tech-crunch or some kind of tech conference coming up and saying that and everyone clapping like a Ted-talk, but it's complete bullshit. That's not what teaching and learning is about, teaching and learning isn't about remembering facts, we know that from our own life. You wouldn't have been able to do your job in diplomacy if it were based on facts, it's useful to have that knowledge, but it's about your experience it's about the things you've done, you've learnt by doing things and so forth, and learning is a deeply personal experience so what a qualified teacher does is know that the children in their charge are individuals and have their own personalities and their own unique talents and interest and desires that are changing constantly. So what a teacher does is direct to engage them in the subject matter. Now then the idea that what we could do is actually dispense with the teacher and get human operators and just give them instructions from a tablet which would make them a teacher, I don't know what that sounds like to your ears, but to mine it sounds horrific.[27]

Vanessa Andreotti put it to us that 'We've been using in schools and in discussions here the metaphor of the bus. That I'm a bus of people, meeting you as a bus of people. And there are many people in the bus. Some of whom I don't know. A cacophony of voices. And it's very important to explore the internal complexities. Because if we try to repress this complexity, what happens is that you project it outside onto an enemy. So how do we create spaces where we can understand what's going on inside of us because of this contradiction and the paradox that we feel with others, in that the bus may be reflective of the whole world.'[28]

Formal education is a dynamic ecosystem of regulators, producers and consumers, inter-connected by technologies, markets and organisations.[29] There are specific forces that drive, and sometimes disrupt, change. By understanding these forces, we can reimagine and recombine the constituent parts, in order to shape the opportunities that innovation can unleash.[30] And we can better understand why education has stagnated.

22 https://www.salesforce.com/blog/08/2016/salesforce-volunteerforce1.html
23 See the Digital Superheroes e-learning program by the Baan Dek Foundation https://solve.mit.edu/challenges/youth-skills-the-workforce-of-the-future/solutions/986/application
24 See OLPC XO's 100$ laptop for children: https://fuseproject.com/work/olpc/xo-laptop/?focus=product
25 https://joanganzcooneycenter.org/wp-content/uploads/03/2018/jgcc_digitalplayforglobalcitizens.pdf, see also Vasagar, Jeevan. "How Robots Are Teaching Singapore›s Kids." Financial Times, Financial Times, 13 July 2017 https://www.ft.com/content/f3cbfada-668e11-e7-8526-7b38dcaef614 Shapiro, Jordan. "Digital Play for Global Citizens." Asia Society , 2018 https://joanganzcooneycenter.org/wp-content/uploads/03/2018/jgcc_digitalplayforglobalcitizens.pdf
26 https://www.ft.com/content/f3cbfada668-e11-e7-8526-7b38dcaef614

27 TGLG interview with Graham Brown Martin, 10 Aug 2017
28 See our interviews with Vanessa Andreotti in 'The World Needs Global Learning Goals' report Sept 2017 available on www.globallearninggoals.com
29 See our third report 'From Ferment to Fusion', pp. 16-8, available on www.globallearninggoals.com
30 For more, see Edmondson, Amy C., and Susan Salter Reynolds. 'Building the Future: Big Teaming for Audacious Innovation'. Berrett-Koehler Publishers, 2016.

The 'era of ferment'[31] may produce innovations that don't 'catch on' beyond early adopters, as producers experiment rapidly to identify which technologies are gaining market traction. This will be followed by a period of shake out, during which a dominant design emerges, as markets configure themselves to enable consumers to better understand and give value to the choices of solutions presented to them.

Having looked at hundreds of innovations, we feel little doubt that technology will find, without much help, the best ways to get educational content to future learners: there are a myriad of methods to do this, and the most effective ones will rise to the top. For a period this will be a mixture of commercial and philanthropic interventions. Governments will be among the beneficiaries, but struggle to do more than validate the best.

For example, we are within a decade of being able to see a digital library of the world's most important knowledge, presented in accessible ways, free to the user. As the next billion come on line, they will have better access to knowledge not just than than Einstein, but than Steve Jobs. This is more significant than any moment ever in reducing the barriers to information, including the printing press.

It is also fairly easy to see how technology improves specific components of education. Computers and the internet replace the printed text book. A smartboard replaces the blackboard. A blockchain 'wallet' may replace the exam certificate.

Harder to see at this point is how technology can help us to reimagine the entire education architecture in a way that 'decouples' us from resource heavy, central facilities, delivering courses accredited by a state, managed by specially trained teachers, with students ranked in terms of results in a series of tests.[32] If we can access information instantly, do we still need exams that demonstrate the extent to which we can memorise facts? Do we still need bricks and mortar buildings as accredited centres to deliver learning?[33] Could blockchain provide as reliable a stamp of approval on grades and exam results as a paper certificate? Can we reimagine higher education to be a mix of shorter degrees completed alongside work, all facilitated by the employer?

We fear that, beyond a handful of pioneer schools in expat communities and elite areas, the current systems won't change fast enough for the new job market - for tech businesses or those they will employ. We will face a new digital divide, where only a small percentage of the global elite can educate their children in the right ways.

In the meantime, we found that businesses will invest increasing amounts in companies that effectively re-train their employees for them, online and offline. Rather than fixing the symptoms of the education crisis, they will simply pay more for the treatments. They will see the education system itself as too bureaucratic, too hard to reform. They will select applicants despite, not because, of their education. And seek to re-wire them. The next generation of CEOs will also be Chief Learning Officers.

In this context, assessment and accreditation will become much more important. People will still need to validate their learning. Will a Google Degree become more valuable than a degree from Cambridge? Eventually this leads to greater equality of opportunity, but there will be a period of flux and complication. How do we ensure credibility and quality for education outcomes in the context of a free for all?
Technology doesn't answer all of these questions. Shaping the market for innovation is as important as the innovation itself.

So we looked carefully at how innovation has worked elsewhere.[34] To be most effective, entrepreneurs have to enter this space with respect for educators who are on the frontline of education. And pledge to do no harm. Innovation should clearly provide an *advantage* to what it replaces. It should be *compatible* with the customer environment. It should not be too *complex* to use. Its benefits should be *observable,* with low *risk* in adoption. It should be easily *divisible*, to enable it to be piloted, tested and refined without damage to learners.[35]

Finally, it is clearly vital that learners understand how to manage technology.
'Our children are growing up in a world where they are constantly multitasking. And we've already seen that our memory and concentration centres in the brain have started to shrink. We don't remember things because we don't need to. And that leads me to the crux of the problem: education hasn't changed at all to keep up with the way the world and our brains are changing.' Dr. Tara Swart
This is something that people of all ages are struggling with as we become *phono sapiens.* Tech companies will need to recognise their responsibilities. This has been a major theme of the Global Tech Panel, to which our work has made a key contribution.

31 See Geroski, Paul 'The Evolution of New Markets', Oxford University Press, 2003, p.162, and also Philip Anderson and Michael L. Tushman, 'Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change' in Administrative Science Quarterly, Vol. 35, No. 4 (Dec., 1990), pp. 633-604
32 See one billion, a UK/Malawi/Tanzania-based non-profit app merging numeracy content with new literacy material to offer directed learning and creative activities alongside continuous monitoring to respond to different children's needs; or Kitkit School (Berkeley, United States), which is developing a learning program with a game-based core and flexible learning architecture aimed at helping children independently learn, irrespective of their knowledge, skill, and environment. The two were finalists of the Global Learning XPrize.
33 See Chimple (Bangalore, India), a finalist of a Global Learning XPrize developing a learning platform aimed at enabling children to learn reading, writing and mathematics on a tablet through more than 60 explorative games and 70 different stories.

34 https://globallearninggoals.com/wp-content/uploads/06/2018/From-Ferment-to-Fusion-Towards-Global-Learning-Goals.pdf
35 See Rogers, E, 'Diffusion of Innovation', 1962

Technology can be the platform for a great leap forward in not just what we learn, but how and why we learn. Tech companies can and will find ways to get the best resources into the hands of tomorrow's Einsteins, Jobs and Curies. Whether they do so for reasons of business or philanthropy, they will become co-investors in opportunity. But that opportunity will be limited without an overhaul of higher education. So we also need to imagine the universities of the future.

"
...it is clearly vital that learners understand how to manage technology.
"

'global education's new tablet, to be taken daily' Photo credit: Pratham

7 Universities of the Future: From Part of the Problem to Part of the Solution

Universities are full of individuals who are passionate about education. They are also the ecosystem within which many of the pioneers we have highlighted are generating the ideas and approaches that will ensure more humans learn the right things in the right way. They must be part of the solution.

But too often they have become institutional impediments to reform. As our Board member Sir Anthony Seldon has argued so powerfully in 'The Fourth Education Revolution', too many governments continue to invest in a factory model for higher education. Mesmerised by international league tables, exam performance and the need for funding, administrators have narrowed what students study. Selection is too rooted in narrow academic performance rather than potential. Technology is increasing the workloads of academics rather than freeing them for groundbreaking research and teaching.

The underlying inadequacy of higher education to respond to the needs of the digital age, combined with the cost of higher education, present a major threat to learning more widely. The lack of problem solving, initiative, creative thinking and technical skills has already caused many companies to reappraise the value of university degrees. Google does not require a degree[36] in its new recruits and 10-15% of IBM's new recruits do not have one.[37] A range of industries are dispensing with the requirement of university degrees for even their senior positions.[38] Incredibly, a degree may even decrease your chances of employment.[39]

Meanwhile, parents and - increasingly - young people, will start to migrate to new content and new tools, as they see that they can achieve their educational objectives faster outside formal education. This will hit the university system first, and hardest. But we are also within a decade of younger people dropping out of school in order to learn faster. Migrant and refugee communities could be among the trailblazers.

Disruption is already happening. In the UK there are calls for university courses to be reduced from three to two years.[40] Code boot camps are now a 250m USD a year industry for engineers,[41] and more of their graduates find work than those from equivalent courses at universities.[42] They are

36 https://careers.google.com/how-we-hire/#do-i-need-a-computer-science-degree-to-be-a-google-software-engineer
37 https://qz.com/858194/ibm-employees-without-college-education/
38 https://www.fastcompany.com/3069259/why-more-tech-companies-are-hiring-people-without-degrees
39 http://www.jordantimes.com/news/local/unemployment-stands-158%E2%80%99
40 https://www.theguardian.com/commentisfree/2017/dec/14/universities-privilege-royal-commission-change-education
41 https://www.youtube.com/watch?v=Kbi_KgBA7-c&feature=youtu.be
42 https://www.coursereport.com/reports/2017-coding-bootcamp-market-size-research

now diversifying to data science, machine learning, the Internet of things, blockchain and other specialized tech disciplines. By 2025, universities could lose 30% of their market share to these leaner alternatives.[43]

So higher education no longer enhances opportunity and social mobility in the way it should. Parents continue to expect their kids to follow the same paths that took their generation through university and into jobs that won't exist. Learners leave university thinking that their education is over rather than just beginning. They may have gained top grades and degrees, but there is no guarantee that they will have the knowledge, skills and character to be positive members of society.

Our work has argued that higher education is at an inflexion point. The fastest growing businesses are demanding skills that the universities don't currently develop. Enlightened governments are adopting new ways of teaching and assessing emotional intelligence. A growing number of university reformers are teaching young people to be kind, curious and brave, and to adapt to different cultures, environments and economic models. Countries such as Singapore[44] and the UAE[45] are rolling out 21st century skills and character curricula. And these changes are not just due to shifting expectations from educational systems, but rather motivated by sound academic evidence: OECD data shows that happy and healthy students learn better.[46]

So what can we expect from a university of the future?

As part of our contribution, we gathered some of the world's most pioneering thinkers on universities to debate reform[47]. They concluded that we must *move from spreading a standardized view of intelligence to nourishing diverse and authentic forms of intelligence; from defining institutional excellence by how many people are left out in selection processes to taking pride in reaching for inclusion* within universities and throughout the entire educational system;[48] and *from ignoring technology's potential for disruption in education to deliberately harnessing its virtues and* minimizing its vices.[49]

First, a university of the future will be more accessible. Not just in terms of equality of opportunity. But as a resource for all of society, not just a small group who study there for three years. The university of the future will become a hub for sharing knowledge, not a refuge for hoarding it. It will offer more programmes for those who choose not to attend full time, allowing them to combine their learning with work and life. As more young people seek to self-educate, including via online platforms, universities will face an economic imperative to keep up. The university will once again be an idea, not a building.

Second, it will be more creative and collaborative. 21st century curricula will go far beyond employability or knowledge for its own sake, and towards preparing the learner to contribute to society. It will develop citizens of a global world,[50] with the ability to connect ideas, environments, and places, to experience failure, to solve problems and to build their character. Education will refocus on how to learn rather than just what to learn. Future graduates will be equipped to adapt to a world in which industries will disappear, and we will need to work together in new ways across cultures and societies. They will have a better understanding of how we can manage our mental our physical health, and organise our lives.

As artificial intelligence replaces mechanical tasks, and more leisure time is created, universities will also cultivate soft skills like play and creative experimentation, as they will be key to our economic survival.[51] As Harvard education professor Howard Gardner is quoted saying 'Don't ask how intelligent anyone is; but rather, how are they intelligent?'

Third, learning will be more human. The institutions that thrive will harness personalized learning and protect individual choices to ensure that students are able to maintain their autonomy and individualism. They will avoid a standardised approach to education that ignores local issues or simply spreads more elite institutions across the world. A university of the future will need to lead the ethical debate about technology and humanity. What are the human values that we want to imprint in technology? How do we live with the machines?

Fourth, like everything else, a university of the future will be more digital. In an industry marked by rising costs and student debt, blockchain and artificial intelligence technologies will allow universities to automate their administrative processes with more confidence, gaining efficiency and transparency, and to digitalise knowledge[52] in place of memorising facts. This means more time, resource and energy for learning, teaching and researching.[53]

43 https://medium.com/@ReBootKAMP/the-degree-is-dead-bb36bdaf6e66
44 www.moe.gov.sg/education/education-system/21st-century-competencies.
45 www.moe.gov.ae/En/MediaCenter/News/Pages/h2030.aspx.
46 https://www.oecd-ilibrary.org/education/pisa-2015-results-volume-iii_-9789264273856en
47 https://globallearninggoals.com/wp-content/uploads/10/2018/Universities-of-the-Future-Towards-Global-Learning-Goals.pdf
48 https://www.bbc.com/news/world41421406-
49 https://globallearninggoals.com/wp-content/uploads/10/2018/Universities-of-the-Future-Towards-Global-Learning-Goals.pdf

50 https://www.globalcitizen.org
51 https://www.nesta.org.uk/report/the-future-of-skills-employment-in2030-/
52 https://www.cmu.edu/scs/robotutor/
53 https://www.thenational.ae/opinion/comment/the-university-of-the-future-will-be-inclusive-innovative-and-creative1.785061-

We do not overestimate the resistance there will be to change, more in this sector than any other we looked at. So we start with more modest aspirations. We need to persuade universities to:

1. Place greater value on character and skills, in recruitment, teaching and assessment;

2. Give space and support to the pioneers among them;

3. Open up a more practical debate about the education needs of society in the Digital Age.

In doing so, we must avoid a single standard approach to global higher education; sacrificing the local to the global; or entrenching existing inequalities. As we harness the potential of the fourth education revolution, universities can do lead the debate on the ethical principles that should anchor these changes, giving them a key voice in the debate. It is also vital to include historically socially and economically marginalized communities in this conversation, and learners themselves.

At their best, universities help humanity access the best of the knowledge and wisdom we have built up over millennia. But an industrial education model created in the 19th century and updated for the mass market of the 20th century is no longer delivering for the 21st century. The next education Renaissance will not be led by those who have traditionally controlled higher education. But by pioneering educators, institutions and governments. And by those currently denied the opportunity of higher education. Young people will liberate themselves to unleash the ingenuity and creativity that they know they need to navigate the challenges ahead.

It is time to reimagine higher education.

The universities that understand these challenges and opportunities will become the universities of the future. The rest will be studied in them as examples of what happens when you fail to deal with change. But if that is the case for universities, what does it mean for countries?

8 Governments and International Institutions: Islands of Opportunity

An era of international cooperation began in 1948, peaked in 1989 and ended in 2016. President Trump's election orphaned a worldview that many had hoped was magnetic enough to become universal. As a result we are learning fast what a leaderless world looks like. More violence, uncertainty and drift. More proliferation of nuclear, chemical and conventional weapons. More murdered journalists and abuse of elections. Less cooperation on the growing threats of climate change and inequality. Without the restraints of international cooperation, the world becomes a free for all.

Education is an indispensable part of the response. But it is also a new battle line: between those who want equality of opportunity, and those who fear it. In a more human, digital and connected world, it will be harder for national governments to retain a monopoly over what young people learn. At the same time, the fragility of the world order will make it harder for the UN or other international actors to fill that vacuum.

This democratisation of access to education is a huge opportunity. It can spread freedom to learn, move, think and innovate. But most governments and the international institutions - often overwhelmed and underfunded - are as yet unready for it.

Even in countries traditionally seen as education leaders, political trends can often take education towards nationalism, rote learning and hierarchy rather than global citizenship, creative learning and networks. Even within the most developed economies, the gap between the best and worst education is alarming.

But there are islands of opportunity. Our reports have highlighted[54] some of the countries and international institutions that have emerged as pioneers of education of the head, hand and heart, and the lessons that can be learnt from them. They show that reformers need a long-term strategy to measure what matters, track what works, and then provide the right incentives to let teachers and learners achieve that in their own way. Finland, Singapore and others show what can be done with vision and patience.

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54 https://globallearninggoals.com/wp-content/uploads/01/2019/Islands-of-Opportunity-Towards-Global-Learning-Goals-singepageversion.pdf

So far, market leaders tend to be smaller countries, more agile, with less bureaucratic and historical baggage, often with lots of coast line. If they continue to accelerate education reform, their citizens will be the global elite of the 2040s, filling the top international positions and dominating the global economy.

Global learning goals will not be possible without national governments. They can help by investing in evidence-based, locally relevant and trackable long-term plans; learning from the pioneers in the field; and setting clear strategic priorities. There are great examples to draw from, which should be more available to reformers.

As Singapore has found, changing the education system will also create new and unforeseen challenges. Empowering and rewarding teachers will remain vital. But we will also see a growing recognition that wider society has a crucial role in educating future generations.

The UN can also be part of the solution, not part of the problem. It emerged from the devastating conflict of two World Wars as the best idea for global citizenship that mankind had yet had. If the UN did not exist, we would need to invent it, to help sovereign states work together in pursuit of global security, justice and opportunity.

If we are in the foothills of a truly global, connected, civilisation, where but the UN can debates be led to protect our basic educational needs? But what the UN represents – a system based on states, hierarchies, and the status quo - is becoming weaker. The pace of technological change means that the internet has often been something that happens to the global architecture, not a force mobilised in support of our collective objectives. From refugees and beneficiaries of UN help, to policy makers and curious global citizens, the UN has a more powerful constituency than it realises. But it must innovate with urgency, or face a slow slide into under resourced decline and irrelevance.

The UN has helped win the argument that education is an indispensable part of the response to the challenges that now face humanity. The liberation of education from national governments is a huge opportunity. It can spread freedom to learn, move, think and innovate. But if we are not vigilant, it could also spread division, distrust, factory education and inequality.

There are no challenges more demanding of the UN's attention.

As a result of our work on governments and the UN, we call for:

- governments to do much more to systematically share best practice and pilots on social and emotional learning. Education diplomacy will be an important new form of soft power. The Building Evidence in Education Donor Group[55] and the Knowledge and Innovation Exchange Program[56] led by the Global Partnership for Education are also important fora for these exchanges;

- research institutions to develop repositories of national and local education strategies across the world;

- learning goals to be prioritised to a greater extent in development partnerships. For countries with leading educational models like Finland, the knowledge capital they have built up should be a core part of the offer.[57] But we should also recognise that many pioneer countries - for example on teaching character - will be lower income. The new innovative financing tools, including IFFED,[58] can be a great springboard for this work;

- international organisations to build on OECD impact in setting evidence-based goals, standards and educational priorities. The UNICEF 'learning passport' initiative[59] (in collaboration with Microsoft and the University of Cambridge) is a great example of what can be achieved;

- intensified work to close the gap between between the goals of skills and character based education and what is actually measured. While there is some work on new forms of assessment underway, such as OECD's new PISA examination on global competence,[60] there is no adequate measure for many of the 21st century competencies. Mapping national school qualifications to internationally recognised systems such as PISA could establish a global understanding of the value of local assessments. Systems such as the IB are increasingly putting these elements at the core of their curricula;

- the deepening of formal and informal networks of pioneer governments. Existing examples are the Atlantic Rim Collaboratory,[61] which aims to establish a global group of countries that advance equity, excellence, wellbeing, inclusion, democracy and human rights. Also the OECD's

55 http://uis.unesco.org/sites/default/files/documents/building-evidence-in-education.pdf
56 https://www.globalpartnership.org/focus-areas/knowledge-and-innovation-exchange
57 https://globallearninggoals.com/wp-content/uploads/01/2019/Islands-of-Opportunity-Towards-Global-Learning-Goals-singepageversion.pdf
58 http://educationcommission.org/international-finance-facility-education/
59 http://www.unicef.org/press-releases/unicef-announces-new-partnership-microsoft-address-education-crisis-affecting
60 http://www.oecd.org/pisa/pisa-2018-global-competence.htm
61 http://atrico.org/

working group on education, which will create a global curriculum as part of the education 2030 plan.[62] As these are seen to generate success, others will follow. We believe Singapore and/or Finland are best placed to convene a pioneer group;

- clearer and persistent championing by the UN system on the principle of 'do no harm'. Education should not be homogenised. It must preserve its local cultural and geographic diversity. Ideas around values, morals, knowledge systems and even skills such as critical thinking, creativity and entrepreneurship have different interpretations in different societies. Global learning goals should be about freeing education, not standardising it or exporting a set of values;[63]

- a Whole Child Development Education Index, supported by the OECD, to create healthy competition and collaboration between national governments. This would need to fully reflect the strengths that many lower income countries have in developing character;

- greater *public* involvement in tracking long term education policies (eg Ireland's 2030 National Strategies for Higher Education)[64] and more innovative education policy monitoring techniques (eg the UAE's High Skills in Arabic for UAE Vision 2021);[65]

- adoption by more governments of '21st Century Competencies';

- greater investment in teacher development (eg Singaporean teachers undergo 100 hours of training each year;)[66]

- the expansion of whole child development as part of the Universal Periodic Review (UPR) process for the UN Convention on the Rights of the Child.[67]

These systems changes are not going to grab headlines or create social media waves. But they are *vital* if we are to reduce obstacles to pioneer educators and help spread the best ideas. Real change also requires businesses - beyond the tech entrepreneurs we have already described - to step up the plate.

9 Business: from Corporate Social Responsibility to Corporate Social Results

Economic productivity is not the sole purpose of education. But the needs of the new economy should be part of the drive towards young people learning more of the right things in the right way. Business leaders consistently tell us that they want people who are creative, who can innovate and think differently, and who can communicate and work in teams. They want a workforce that posses 'globalised' knowledge and borderless, transferable, non-academic skills. An IBM survey of CEOs notes that creativity was the most crucial factor for future success.[68]

Yet the graduates now seeking employment have not been encouraged to develop these skills in schools, colleges and universities. So businesses are becoming increasingly distrustful of the traditional degrees and certificates that were once considered as guaranteed tickets to executive roles. By 2020, more than a third of the core skill sets of most occupations will comprise skills that are not yet considered important today.

Investing in education is smart for business. Education builds sustainable societies, improves economic growth, business opportunities and wages. For every $1 invested in a child's education, there is a $53 return to the company at the start of employment,[69] with each additional year of education associated with an increase of between 13% and 35% GDP per capita.[70] Children denied education are also at far greater risk of sexual exploitation, trafficking, child labour,[71] and recruitment by extremist groups.[72]

Our work has highlighted many of the ways that businesses are already making a difference. At the heart of this is a realisation that business can best help not by providing finance, but with practical help. To help them, we were involved in creating the Global Business Coalition Rapid Education Action (REACT) platform. Launched in October 2016, it has already mobilised over 50 companies that have pledged time, creativity and practical ideas to support the provision of education in conflicts, disasters and other crises.

Consultancies such as Boston Consulting Group are already providing advice to the *Education Cannot Wait fund* – a global fund for education in emergencies and protracted crises, launched last year

62 http://www.oecd.org/education/2030/
63 http://othereducation.org/index.php/OE/article/download/13/28
64 http://hea.ie/assets/uploads/06/2017/National-Strategy-for-Higher-Education2030-.pdf
65 https://www.vision2021.ae/en/national-agenda2021-/list/card/percentage-of-students-with-high-skills-in-arabic-according-to-national-tests
66 http://www.economist.com/asia/2018/08/30/it-has-the-worlds-best-schools-but-singapore-wants-better
67 https://www.ohchr.org/en/professionalinterest/pages/crc.aspx

68 https://www03-.ibm.com/press/us/en/pressrelease/31670.wss
69 http://www.brookings.edu/~/media/research/files/reports/09/2013/investment-in-global-education/investment-in-global-education-final--web.pdf
70 The exact amount depends on the methodology used. http://www.unicef.org/publications/files/Investment_Case_for_Education_and_Equity_FINAL.pdf
71 http://freedomfund.org/wp-content/uploads/Lebanon-Report-FINAL8-April16.pdf
72 http://www.hedayah.ae/pdf/role-of-education-in-countering-violent-extremism-meeting-report.pdf

– on how to develop projects in Syria, Yemen and Chad. Accenture[73] and KPMG[74] have schemes allowing employees paid time off to volunteer to help. Companies such as the BMW Foundation have funded places at European universities to allow displaced students and faculty to continue their education.[75] HP has created digital classrooms in Lebanon for those fleeing Syria to access the best possible education.[76] Google deployed Person Finder to help families locate loved ones.[77] Microsoft has allowed people to use Skype to make free calls. Ericsson ran a project to reconnect refugees in Europe with their families. ITWORX Education is offering significant in-kind support – providing tablets and access to digital learning platforms for those hit by crisis. Endless has donated hundreds of computers to refugees in Jordan.[78]

Other companies are providing the physical space in which to study. NRS International has pledged tents and shelter for schools. In Jordan, engineering companies are working with USAID and the Jordanian government to build new schools. Coalitions of companies, such as Techfugees, the UK Lebanon Tech Hub and Alt City, are bringing ingenuity and time to the challenge. Money-transfer companies such as Western Union have made it easier to send financial support to those who need it to continue their education. And Mastercard has distributed prepaid debit cards to thousands of refugees. Facebook is providing Wi-Fi connectivity to locations where refugees are based. Uber is providing free delivery of vital items, including books, for child refugees.[79]

Refugee youth also need sustainable sources of income and the ability to receive relevant training in skills for the 21st-century job market. A partnership between NaTakallam and Re:Coded is using technology to pair displaced Syrians with Arabic learners around the world over Skype.[80] This provides Re:Coded with the resources to pay refugees in Iraq as they train to become world-class software developers and links them to job opportunities.

But there is so much more we can do. Organizations working with refugees in the field are now sending REACT their specific requests for help. These include logistics networks to get essential education materials to children inside Yemen, Chad or Syria; I.T. support to help us connect businesses and individuals with global education challenges; places for displaced communities in apprenticeships and training schemes in Europe and the Middle East; and engineering support for building schools in Lebanon and Turkey.

GBC-Ed are now asking Education Cannot Wait, UN agencies and others on the front line of the education effort to explain what help they need. Only with real, tangible requests can we find out if this new system can work.

More widely, the private sector can be a key voice in the movement for global learning goals as an advocate for change, through networks such as the Global Business Coalition for Education. It can pioneer new training and assessment in 21st Century skills and competences. And it can act as a problem solver on the second learning Renaissance, using ingenuity and drive to help educators and governments.

So we need a shift in the mindset of businesses when they look at global education. From corporate social responsibility to corporate social results. For parents and learners, the shift may be the opposite - from results to responsibility.

'forget about memorising all those books' Photo credit: wocintech

73 https://www.accenture.com/us-en/blogs/blogs-paying-forward-volunteering
74 https://home.kpmg.com/content/dam/kpmg/lu/pdf/kpmg-foundation-volunteer.pdf
75 https://bmw-foundation.org/press/1st-berlin-global-forum/
76 https://garage.ext.hp.com/us/en/impact/clooney-foundation-for-justice-hp-unicef-syrian-students-refugees.html
77 https://www.theguardian.com/global-development-professionals-network/2017/jan/12/live-qa-how-can-technology-improve-humanitarian-response
78 https://gbc-education.org/businessess-react-eie/
79 Idem
80 https://twitter.com/recodedofficial/status/835759450376060928

10 Parents and Learners

Every parent wants their child to thrive. But in the absence of ways to assess hand and heart, and because of the requirements for a place at the right university or business, they are inevitably blinkered by the need to pass the right test. Pioneer educators tell us that as a result they are often an obstacle to the change and reform that their children actually need. They are often conservative in their thinking about education, and resistant to change. Just sit at the back of any parent/teacher meeting where a headteacher proposes spending more time on drama or art than exam preparation.

We wanted to understand how to shift the debate among parents. So we gathered focus groups, reached out to key online influencers, and hosted a podcast series on Sarah Brown's Better Angels platform to connect with them.

The learning revolution we need requires grassroots support and action from learners and their parents (who must also be allowed to be learners).

Parental resistance is one of the biggest barriers to a learning revolution. But we must not dismiss parents' doubts as simply nostalgia or conservatism. They are rooted in genuine concerns for their children's prospects in a rapidly changing world. Showing parents that in that world, a learning revolution is the only way "to shine like I know they can, in the right system" (in the words of one of the parents we spoke to) is essential.

From these conversations we have suggested framing that avoids misunderstanding of 'soft' education, that engages parents on an education for the 'whole' of their child, and reassures them on assessment and preparation for the future.

We hope these proposals are taken on, and experimented with, by the wider movement for education change, because if more effective communication can bring parents on board, that may be prove to be the tipping point for achieving a learning revolution.

But ultimately, it is the learners themselves who have the most to gain from the campaign for global learning goals, and the most to lose from the status quo. Will the founders' generation find a way to equip themselves with the right skills? Not to pass a university degree or school exam, but to thrive?

The answer is almost certainly yes. Many will find the technology solutions to build the knowledge, skills and character they need. But they need help in creating the space to do so, and the validation of their learning to allow them to experiment and innovate about how they acquire it.

As part of our work, we asked students on every continent to help us develop the core elements of a global curriculum for the head, hand and heart. What did they believe they most needed to learn in order to thrive?

Clockwise: Learner Hackathons in Madrid, Shanghai, Sydney, and Abu Dhabi. Photo credit: Global Learning Goals

From Abu Dhabi to Shanghai to Sydney to Madrid, we invited students to hack their own curriculum. There was consensus for learning about each other through more global history, for learning about themselves through physical and mental health, and for learning how to learn by staying open and understanding the power of communication. There were specific recommendations for educators: more international connection, more project-based learning, and more flexible assessment. But the fundamental action that must be taken is to involve learners in designing their own learning in the first place.

Learner Hackathon in Abu Dhabi

To accelerate the ability of learners to drive their own education, we will need to see the rapid development of free, high quality, curated education content platforms like the LearnCloud.[81] We will need global learning goals that can help learners to navigate the content. And to develop robust, credible global assessment standards against which to measure progress, including on skills and character. As these become established, the incentives will shift. Businesses and higher education institutions are more likely to recruit based on more than knowledge-based exams alone. More educators will create high quality content on their fields, with the highest quality rising to the top (literally in the case of tables of YouTube hits). And governments will have more interest in ensuring that knowledge, skills and character are validated in a robust and fair way.

Of all the sectors we have looked at, that is the real gamechanger. Education has been a form of old power:[82] closed, inaccessible, top down and spent carefully like a currency, more formal and managerial. Old power thrives on competition, confidentiality and exclusivity.

81 https://learncloud.rumie.org/
82 https://thisisnewpower.com/

With learners taking back control of their education, it becomes a form of new power. A current – open, participatory, driven by individuals. People place a higher value on the experiences they can shape. New power relies more on networks rather than hierarchies and organograms. It works best in conditions of openness and transparency. Think of Airbnb or the ice bucket challenge. New power increases when you give it away.

> 'Younger people have a sense of their own agency. The question is, where can they direct their participatory energies? If you want learners to drive these changes to the system that you describe, it has to be compelling for them to do that. What has made other movements really fly, they are personal, they are identity based, they created a context in which people can work with each other sideways, form deep relationships with each other. So thinking about that in an education context, how do you get the learners to organise together and all of the benefits that will come with that, the engagements, the relationships that are produced, the identity that comes out of that. That's what's going to drive the movement, not the policy not the issues themselves even necessarily',
> *Jeremy Heimans, CEO, Purpose*[83]

The key to this more political of changes will be to see individual citizens as a vital part of creating a happier and better education, not just as beneficiaries. We should trust more in the wisdom of crowds. This means churn and instability – the mob is of course not always right and there will be a forceful reaction from vested interests. Learners will need to recognise and use their power wisely. *Digital technology has placed a smartphone superpower* in their hands. But like any superpower, it must be accompanied by a sense of purpose. Apathy and distraction are as great a threat to learning as lack of resource or stubborn stakeholders. The awakening of education will require as much peer review and content creation by learners as possible. And reformers to seek out the ideas that are spreading sideways among learner - online and offline.

Generation X grew up playing Tetris. It was neat, top-down, with clear rules. Our children are playing Minecraft. The best ideas now spread sideways. We need to build solutions to the future of learning together. Rather than moaning about the activism of young people, we need to understand their desire to participate more freely and flexibly. We need to help them develop their curiosity, kindness and courage.

It turns out that our survival depends on it.

83 www.purpose.com

PART 3

**An Education Awakening:
What do we *really* need to learn?**

11 Global Learning Goals

The future is already here, it is just not evenly distributed' William Gibson

In these separate fields, we see real potential for reform to accelerate, and have set out practical ways it can happen.

But to make the breakthroughs that are needed, we must also accelerate collaboration between pioneers and reformers in the different fields. To do so we have argued that we need a central set of learning goals around which to convene. We do not propose a global curriculum that standardises what young people learn. We do not propose an intensification of national league tables that rank students based on their ability to pass academic tests. Instead, we want to see more freedom in education, not less - to innovate, learn, work together.

Global learning goals can provide a framework for all the key groups - governments, international organisations, universities, teachers, learners, parents, business - to move from debating what is not needed to what is needed as part of an enlightened education. They allow innovation and experimentation, while preserving some overall scaffolding to protect learners and educators.

What do we really need to learn? German physicist Jacob Bronowski's work on the nuclear bomb in the 1940s drove him from the most complex corners of the destructive power of mathematics and science towards a profound understanding of this simple but vital challenge. He concludes 'The Ascent of Man',[84] his extraordinarily powerful account of human development, standing knee deep in a muddy pond at Auschwitz, with the slime of the holocaust - in which many of his own family were killed - running through his fingers. We are work in progress, or as he puts it, 'knowledge is an unending adventure at the edge of uncertainty...man masters nature not by force but by understanding...every animal leaves traces of what it was; man alone leaves traces of what he created.' He talks about the danger of certainty.

We need, he exhorts us in the final shot, "to reach out and touch people."

Our ancestors have left us with an extraordinary bank of wisdom about our place in the world, and how they found ways to create and master the technologies of their times. But the amount of information we inherit is now growing at an exponential rate. Until 1900, human knowledge doubled every century. By 1950, human knowledge doubled every 25 years. Now it is every year.[85]

Much 20th century education was about mastering content, often with an increasingly intense specialisation. But as knowledge expands and becomes more available, an extreme focus on remembering facts means there is a risk of forgetting how ideas connect and spark. What was more important to Marie Curie - the 'facts' she learnt in her Warsaw school in the 1870s, or how her father taught her to analyse, question and replace them?

'Never memorise something you can look up.' Albert Einstein

It is not about what you know, but how you use it.

To update Einstein, why memorise anything on Wikipedia?

We have argued that technology is a big part of the education solution, not the problem. But fixation with the next shiny gadget should not lead us to lose wisdom developed over millennia. Much education should be rooted in the communities in which people are learning, and we should be able to identify a common set of core knowledge that is more widely shared by humans.

Perhaps the greatest danger to the most influential generation in history is not actually the nuclear bomb, environmental catastrophe, the robot age or the crazed terrorist, frightening as they all are. The greatest danger is in fact the loss of the curiosity to learn from each other, the loss of the desire to live together. Our ability to find ways to coexist is what makes us survive.

So we see nine global learning goals, three each for the **head, hand and heart.**

84 https://www.theguardian.com/science/2011/apr/15/ascent-man-jacob-bronowski-review
85 http://www.digitaljournal.com/tech-and-science/science/op-ed-knowledge-doubles-almost-every-day-and-it-s-set-to-increase/article/537543

For the head, our proposed global learning goals include the history of human development, so that future generations can understand the story of how our species developed, from cave paintings to Mars missions. In place of education systems that prioritise the teaching of conflict, education should cover the development of political and social systems for coexistence and peace. And it should ensure that learners have an understanding of the planet, and mankind's relationship with it.

For the hand, our starting point is that the workplace in just twenty years' time will be unrecognisable, as digitalisation and automation transform every industry. The idea of a single job or career is becoming obsolete. According to the World Economic Forum, the average time spent in a single job is now 4.2 years. 35% of the skills that workers need, regardless of industry, will have changed by 2020.[86] One in four adults reported a mismatch between the skills they have, and the skills they need for their current job.[87] Classic office-based and manual roles will disappear, just as those roles replaced the need to spin cotton, lift sacks or make arrows. Academics and business leaders are saying that the current education model is not providing young people with the social and emotional skills they will need to solve problems, share and critically evaluate new information, or work well with a team. Without wanting to join what Rebecca Winthrop of Brookings calls 'framework wars',[88] we think it is possible to distil the three key skills to: how to learn (and keep learning), how to adapt to a global context, and how to manage yourself and your life.
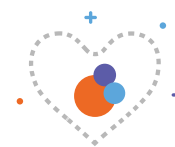
For the heart, we build on Howard Gardner's theory of 'multiple intelligences'.[89] We possess many more forms of intelligence than are assessed in IQ tests, including logical and linguistic; creative and physical; personal and social; and *moral* and *spiritual*. If these qualities are not nurtured when a person is young, they can remain dormant for the rest of life.

Ask just about anyone when and how they learned the most important lessons in life, and they are unlikely to point to a third grade biology class. Instead they will talk about the experiences that shaped their characters: the mistakes from which they learnt, the successes and setbacks that punctuate every life. As Michael Jordan puts it: 'I've missed more than 9,000 shots in my career. I've lost almost 300 games. So many times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed.[90]'

Mainstream academic opinion now confirms what education pioneers and sports stars have long emphasised: the vital importance of learning character. And character should not be seen as something that only takes place separately to formal education - in the home, sports club or place of worship. As with skills, in recent years there has been a rapid growth in academic work on which character attributes are most important, and how to teach them. For the World Economic Forum, they are curiosity, grit, leadership, initiative, adaptability and, social and cultural awareness. For the OECD, they should influence wellbeing and socio-economic progress, be measured meaningfully, and remain malleable. Strength of character increases the probability of completing education and being employed.

Drawing from the best of the models we have looked at for teaching character, we suggest three aspects as most vital:

*stay kind
stay curious
and stay courageous.*

86 World Economic Forum (2017) 'Skill, re-skill and re-skill again. How to keep up with the future of work', http://wef.ch/2vLKdh8
87 World Economic Forum (2017) 'Accelerating Workforce Reskilling for the Fourth Industrial Revolution', http://www3.weforum.org/docs/WEF_EGW_White_Paper_Reskilling.pdf
88 https://globallearninggoals.com/framework-wars/
89 https://books.google.es/books?hl=en&lr=&id=4Y5VDgAAQBAJ&oi=fnd&pg=PT4&dq=howard+gardner+multiple+intelligences&ots=RromBfW9Hy&sig=tbxnDwVyo3ui0Or9aMdWJMCCWkU

90 https://www.cbsnews.com/pictures/celebs-who-went-from-failures-to-success-stories/8/

The challenge for the next phase is to find ways to measure skills and character, so that governments, educators, learners and parents are more incentivised to prioritise them. Brookings have developed the most comprehensive list of the different frameworks for the skills and competences required, the Learning Matrix Task Force[91]. The Organisation for Economic Co-operation and Development (OECD) has developed a way to test character skills within their Programme for International Student Assessment (PISA)[92]. Yet the lack of consistency in the definition and measurement these qualities poses a challenge for global learning goals. There is a vacancy for someone to develop a credible global assessment of learning potential for an age of massive human migration.

As our contribution then, we offer below a potential framework, based on nine global learning goals of the head, hand and heart. But our main objective is to encourage debate. This is just one take among many.


'Hands up for a change' . Photo credit: Pratham

91 https://globallearninggoals.com/wp-content/uploads/01/2018/Kindling-the-Flame-Towards-Global-Learning-Goals160118-.pdf
92 OECD (2016) "OECD proposes new approach to assess young people's understanding of global issues and attitudes toward cultural diversity and tolerance" http://www.oecd.org/pisa/oecd-proposes-new-approach-to-assess-young-peoples-understanding-of-global-issues-and-attitudes-toward-cultural-diversity-and-tolerance.htm
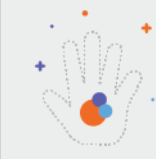
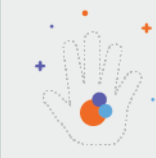**GLG1: Learning How We Evolve**
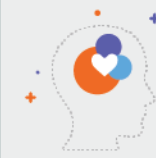
GLG2: Learning How We Coexist
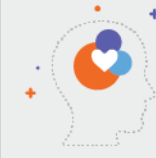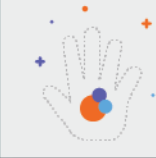
GLG3: Understanding our relationship with the planet

GLG4: How to Learn (and Keep Learning)

GLG5: How To Adapt

GLG6: How to manage yourself and your life

GLG7: Stay Kind

GLG8: Stay Curious

GLG9: Stay Courageous

GLG1: Learning How We Evolve

'The goal of education is not to increase the amount of knowledge but to create the possibilities for a child to invent and discover, to create men who are capable of doing new things.' Jean Piaget

How did we move from being hunter gatherers to agricultural and industrial societies? How did we master previous tools? How did we develop the means to create, craft, innovate? What are the key moments in humanity's collective story? There is a vacancy for someone to write that syllabus, in order that the generation who learn it can write the next chapters.

GLG2: Learning How We Coexist

'For eons, humans have struggled to discover less destructive ways of living together.' Margaret Wheatley

Lebanon's 'National Charter for Education on Living Together'[93] gives pupils the knowledge and attitudes to coexist in one of the most diverse societies on earth. There are similar movements in Rwanda, South Africa and Northern Ireland, driven by individuals and communities. The fundamental question facing so many communities is not just how the economy or politics are managed, but – more profoundly – do the next generation have the courage to coexist? They should be equipped with the vision, judgement and patience to achieve it.

Most education systems prioritise the history of nations and states over the history of humanity. And within national history, students spend most time studying conflicts - normally those that their countries won. This is too often at the expense of understanding how political and social systems developed - usually with blood, toil, sweat and tears - to allow humans to live and work together. As Ken Robinson has argued, education should equip people to live together in tolerant and culturally diverse societies, to understand the world around them and the talents within them so that they can become fulfilled individuals and active, compassionate citizens, able to build lives that have-meaning and purpose in an unpredictable future? [94]

How do learners open up to other ways of thinking and being, and to appreciate diversity of people and culture?[95] We should teach students how to be citizens of everywhere, active in creating a more equal, just, peaceful and sustainable world. The UNESCO framework for Global Citizenship Education proposes that students understand multiple levels of identity, including a 'collective identity' that transcends individual cultural, ethnic or other differences[96]. This will then provide an understanding of universal values such as justice, equality, dignity and respect[97].

GLG3: Understanding our relationship with the planet

'Protecting our future on this planet depends on the conscious evolution of our species', Leonardo diCaprio

We have seen the emergence of an overdue and essential understanding that our fate is deeply connected with the ecology of the planet. The Paris Agreement of 2015 is a big step forward. Yet our collective actions to date are barely scratching the surface of the response necessary. Many ecologists already say that we are too late to manage, let alone turn back, the devastating environmental consequences of the industrial age. The UN continues to tell us that failure to reduce emissions will create water and food shortages, natural disasters, refugee crises, flooding, and mass extinction of plants and animals.

We need to ensure that education is a foundation for the urgent debate on the right global rules, including how best to balance the developing world's legitimate energy needs and aspirations with the long term health of the planet. We have to manage the end of the fossil fuel era without triggering the kind of major conflict that energy transitions have created in the past.

93 http://adyanfoundation.org/institute/policy-making/national-strategy-for-citizenship-and-coexistence-education-nscce/
94 sirkenrobinson.com/pdf/allourfutures.pdf and https://www.tes.com/news/school-news/breaking-views/ken-robinson-a-teacher-basher-schools-must-stop-listening-his

95 https://globallearninggoals.com/wp-content/uploads/01/2018/Kindling-the-Flame-Towards-Global-Learning-Goals160118-.pdf
96 https://en.unesco.org/themes/gced
97 http://hepg.org/hep-home/books/preparing-teachers-to-educate-whole-students

GLG4: How to Learn (and Keep Learning)

'Live as if you were to die tomorrow. Learn as though you would live forever .' Gandhi

Just as humans have evolved in response to the threats and opportunities of the past, we now need to learn to adapt for the fourth industrial revolution. The skills that will be most valued are those that cannot be digitised, where humans have an advantage over machines: creativity, social interactions, and jobs that require physical dexterity and mobility. Learners can't rely on a single discipline. Students who make the most significant contributions to society will be those who have gained learning capacity and learning potential and applied these evolving skills to their evolving context.

So ongoing learning is essential to surviving economic and technological disruption. There are excellent examples of opportunities for lifelong learning Many coding-bootcamp providers have emerged. Massive Open Online Courses (MOOCs) are offered by companies such as Coursera, EdX and Futurelearn, with thousands of short courses on a variety of subjects. LinkedIn also offers courses through their LinkedIn Learning service. Amazon's cloud-computing division has an education arm.

Yet few countries come close to the Danes, a third of whom take part in the Danish government's lifelong learning scheme[98], with two weeks of skills training a year for all citizens. Or to Singapore's SkillsFuture program, which has reformed its curriculum to prioritise that students become confident and independent thinkers, self-directed learners, active contributors, and concerned citizens[99].

Creativity will be at the key to this ability to keep learning - the ability to perceive the world and reality in new and innovative ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions. CEOs say it is the most crucial factor for success. Teaching creativity via the arts creates populations who are able to think critically and divergently. Yet somewhere and somehow along the way, much education stifles creativity. Over time, most humans learn not to colour outside the lines. School interfered with their education. Or as Picasso put it, 'Every child is an artist. The problem is how to remain an artist once we grow up.'

98 http://eng.uvm.dk/general-overview/lifelong-learning
99 http://www.skillsfuture.sg/
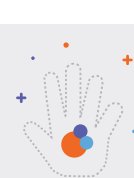
GLG5: How To Adapt

As part of the 2030 education framework, the OECD has developed a set of Global Competencies to reflect the skills that individuals need to thrive in a changing and globalising world[100], along with practical implementation frameworks in collaboration with the Asia Society[101]. Global competence is 'the capacity to analyse global and intercultural issues critically and from multiple perspectives, to understand how differences affect perceptions, judgments, and ideas of self and others, and to engage in open, appropriate and effective interactions with others from different backgrounds on the basis of a shared respect for human dignity.[102]' This includes:

- knowledge and understanding of global issues and other cultures.

- skills such as communicating effectively with people from other cultures and countries, analysing and thinking critically to scrutinise and gain information, and adjusting thoughts and behaviours to fit new situations.

- attitudes of openness towards people from other cultures, with respect for cultural difference, global-mindedness, and personal responsibility for one's actions.

The International Baccalaureate (IB) is the best example of a curriculum that teaches these skills. IB learners are more likely to be 'inquirers; knowledgeable; thinkers; communicators; principled; open-minded; caring; risk-takers; balanced; reflective'[103].

'And this is why the IB has thrived in the way it has, because of that ambition, not just to say here's an international curriculum that meets your practical needs, but to say this is something which is going to change the world and make the world a better place. And I believe that's why the IB has survived as long as it has', Carolyn Adams, Director of Strategy Development and Execution, International Baccalaureate.[104]

100 OECD (2016) 'Global Competency for an Inclusive World'. https://www.oecd.org/education/Global-competency-for-an-inclusive-world.pdf
101 https://asiasociety.org/oecd-asia-society-release-framework-practical-guide-global-competence-education
102 Ibid.
103 IB learner profile http://www.ibo.org/contentassets/fd82f70643ef4086b7d3f292cc214962/learner-profile-en.pdf
104 Interview with TGLG, 30 August 2017

GLG6: How to manage yourself and your life

In much of the world, the units that traditionally taught practical life skills are being broken down by economic and societal pressures on parents, by mobility and technology. Schools have not evolved to fill the gap. The shelves of self-help books at any airport demonstrate the vacuum that people feel.

Learners should therefore master the basics on what to eat and drink; and how to manage their finances, and stay physically and mentally healthy. In this respect, it is not so much about a 21st century education as a 1st century education. When we asked today's university students what they wanted and needed to learn, life skills came up time and again - from learning cooking in the desert, to starting a business in a virtual online community[105].

GLG7: Stay Kind

'Intelligence plus character: that is the goal of true education.' Martin Luther King

Students should learn to be open hearted and open-minded. Our wellbeing could be significantly improved if our education had a bigger focus on ensuring that we make good and happy relationships[106]. The key common factor among Google's most successful teams is kindness: groups that took care of each other were the most innovative, productive and happy.

Learners should be recognised for compassion, and for encouraging it in others. We need to broaden the campaign led by organisations, such as the International Positive Education Network, to foster kindness, emotional intelligence and wellbeing in young people[107].

105 See our report 'Universities of the Future', Oct 2018, on www.globallearninggoals.com
106 A Harvard University 80 year longitudinal study of adult development determines that the single most important factor for happiness and health is relationships (https://news.harvard.edu/gazette/story/04/2017/over-nearly-80-years-harvard-study-has-been-showing-how-to-live-a-healthy-and-happy-life/)
107 http://ipen-network.com/

GLG8: Stay Curious

The greatest educators have always sought to inspire curiosity. And the greatest innovators have always harnessed it - 'I have no special talent', Albert Einstein used to say, 'I am only passionately curious.' The idea that truth is somehow less certain, less solid, has been given rocket boosters by the internet. Conspiracies fester and reason and rationality flounder. Fake news weaponises intolerance of difference and diversity, and creates a wall of noise and distraction. We feel unable to keep up or discern fact from fiction, overwhelmed by information, fearful of missing out on the latest celebrity scandal, Trump tweet, or cute cat.

So we must ensure that the next generation is equipped not just with knowledge, but with the critical thinking necessary to sift through the information in front of them. This curiosity can be taught through much of the existing curriculum for arts and sciences. Across the world, we need a generation of curious global citizens[108]. We have to help them use their smartphones to open up to that world, not to hide from it. As Jacob Bronowski puts it, 'It is important that students bring a certain ragamuffin, barefoot irreverence to their studies; they are not here to worship what is known, but to question it.[109]'

GLG9: Stay Courageous

The CEOs of highly successful corporations attribute their success to their failures. Their business decisions are considered experiments, which are designed to fail frequently for lessons to be learnt. As Mark Zuckerberg puts it, 'the biggest risk is not taking any risk...in a world that's changing really quickly, the only strategy that is guaranteed to fail is not taking risks.[110]' Yet, our education systems too often still teach students to avoid failure.

108 https://seths.blog/09/2014/the-shameful-fraud-of-sorting-for-youth-meritocracy/
109 Jacob Bronowski, The Ascent of Men (2011)
110 https://www.entrepreneur.com/article/233890

One NGO is trying to plug that gap in the Philippines. TULA68 focuses on character via what it calls 'missions'[111]. These cover real-world challenges that learners attempt. As students move through the missions, there is a specific focus on risk, courage, drive, perseverance and potential. Angela Duckworth has pointed the way on grit and education. People with grit are more likely to overcome stress and use failure as a means to achieve their goals. To have it, you need to find meaning in your work, even without recognition. It means owning your own learning. As with successful companies, it is the failure, not the success, that builds human capacity[112].

Mike Tyson said that 'Everyone has a plan until they get punched in the face.' Students need to be able to think divergently, and question issues from different contexts and cultural perspectives. This requires courage.

To move global learning towards these goals will also require **courage**. As part of our journey, we were privileged to meet extraordinary pioneers, activists, educators and thinkers. We wanted to highlight some of those we believe will be part of the transformation ahead.

111 http://www.tulaeducation.com/
112 https://angeladuckworth.com/grit-book/
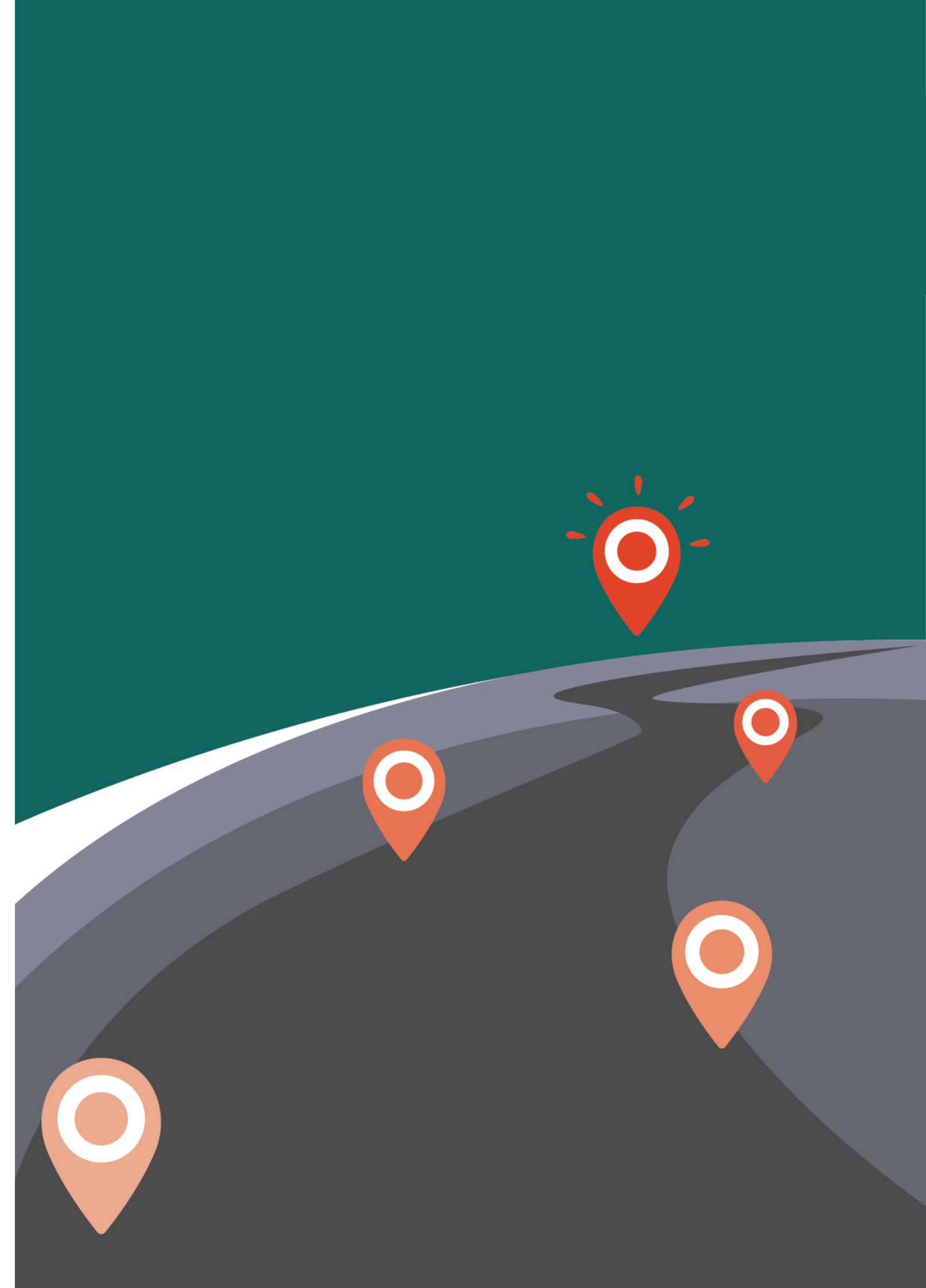
PART 4

An Education Awakening: Who?

12 The Pioneers Who Can Help Deliver Change

'Each time a man stands up for an ideal, or acts to improve the lot of others, or strikes out against injustice, he sends forth a tiny ripple of hope, and crossing each other from a million different centers of energy and daring those ripples build a current which can sweep down the mightiest walls of oppression and resistance.' Bobby Kennedy

John Sexton - the global visionary

John is a force of nature who has already had a huge impact on how to deliver higher education at the global level. The architect of NYU's global campus concept, his legacy was to give students (from every continent) the chance to develop the cultural understanding that can only be developed by living and studying with learners from different backgrounds. The university of the future - or as he stresses *"a university of the future"* will owe much to the approach he has pioneered.

Sarah Brown - the coalition builder

"Grab the high hanging fruit, and cling on". For almost a decade, Sarah has been at the intersection of the business, NGO, social media and government coalitions most engaged on global education. More than anyone in this space, she has identified the way in which public campaigns can combine with innovative pilots and quiet, patient lobbying to make change happen. She maintains that the way to get education higher up the agenda is to show that it is the key that unlocks all other global challenges. Sarah's choice of campaigns, and methods (from youth ambassadors to podcasts) are normally a good indication as to where other reformers in the sector will be in two years. Sarah even gave us a four-step blueprint for how to change the world based on her experience with TheirWorld.

Andria Zafeirakou - the creativity guru

Visiting Alperton Community School, where Andria teaches art, you are swept up by the infectious energy she brings to her vocation, and by the evidence - on walls and in student conversations - that this works. She argues passionately that creativity is the basis for success in all subjects. Last year, she was recognised by the Varkey Foundation Global Teacher Prize as the teacher of the year.

"I remember the journey of each child from their blank canvas" Andria Zafeirakou

Dubai Abulhoul - the stereotype defier

Dubai had won 'Young Arab of the Year' even before winning a Rhodes Scholarship at Oxford University. A successful author of children's books that challenge stereotypes, she has been an outspoken advocate of the importance of young people shaping their own lives. As the centre of gravity for much policy innovation moves east and south, it will be pioneers like Dubai who will increasingly shape the debate.

"When we were in first grade we were taught the importance of colouring inside the lines. We need to learn the exact opposite: the importance of colouring outside the lines.[113]"

Andreas Schleicher - the visionary geek

There are few senior officials at international organisations whose names are known beyond their corridors. But Andreas Schleicher's work has gained him rock star status on the global education circuit. Having developed the PISA assessments of national education success, he became worried that his work was driving governments towards a more assessment-based competition. So he has changed tack, developing innovative ways of teaching and assessing 'global competence'.

'Students who grow up with great smartphones but poor education are facing very significant and unprecedented risk. in the past teaching content knowledge was always a tower of education but in the world in which we live today we are no longer rewarded for what you know.' - Andreas Schleicher, in an interview with Tom Fletcher.

Fernando Reimers and Connie Chung - the professors of coexistence

Many academics are captured by the systems in which they work. But Fernando and Connie have developed a curriculum that - as it is more widely adopted - can change education at all levels. Aiming to equip diverse students from all over the world with a comprehensive global citizenship education, their 2016 book "Empowering Global Citizens: A World Course" presents itself as a thorough curriculum to teach and learn the competencies and skills necessary to navigate our times.

"One of the ways in which we can make progress is to break what is a very ambitious undertaking: I don't hope that we are going to have necessarily every country in the world ready to include a mandatory global citizenship curriculum in their courses. [...] but I don't doubt for a second that you can build coalitions with

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113 NYUAD Commencement Speech, 2017

various individuals and groups and networks, interested in global citizenship, and that you can tell them how to do it." Fernando Reimers, in an interview with Tom Fletcher

Valerie Amos - the insider's outsider

Valerie has been a trailblazer for equal opportunity, leading by example as the first black woman in the British cabinet and then as the head of the UN's Humanitarian Coordinator. As Vice Chancellor of SOAS, she is now ensuring that a generation of learners understand local context, and the contested narratives of history. In her podcast interview for this project, she traced this back to the arguments her parents encouraged at the dinner table.

"The thing that my parents really focused on helping us do - because they so believed in education and the importance of education as a way of being able to overcome challenges - we were taught to argue your case at home around the dining table. We had to be good debaters. We were encouraged to think logically, to go and get evidence to support our arguments. That's been very important to me." - Valerie Amos, in a podcast interview with Tom Fletcher.

Tariq Fancy - the democratiser of opportunity

A close friend's death led Tariq - a Canadian innovator - to set aside a successful career as a tech investor, and look instead at how to ensure poor communities can access educational resources. Years of experimentation led his team at Rumie to develop 'the LearnCloud', a crowd-sourced platform of material. Now backed by Accenture, UNICEF and others, Tariq allows us to imagine the equivalent of an education Wikipedia, from which educators and learners can select the resources they need. If the best learning resource on, say, Pythagoras, is available for free online, why would you choose anything else? Tariq is not someone who thinks small. Rumie's aim is to become the world's largest open repository of free learning content, collaboratively organised and localised for different communities and cultures.tures.

Jeremy Heiman and Henry Timms - the prophets of purpose

Jeremy Heimans and Henry Timms have written 'New Power' a nifty guide to the 21st century that is genuinely new and informs much of our approach. Instead of one more catchy way of describing how the world works, they have written a manifesto for organising that world with more humanity and purpose. Ultimately you'll either hate it or wish you had written it, depending on whether you believe in old or new power. But more importantly, they are putting the ideas into action though 'Purpose', building the kinds of coalitions and campaigns that change the world. We hope that those lessons can inform the education revolution to come.

Fadi Daou - the courageous coexister

Fadi does not look like a revolutionary. He wears a dog collar, and listens quietly and modestly. Yet in reality he is on the frontline of the key arguments in the Middle East, and increasingly the world. His NGO, Adyan, has pioneered a curriculum to teach coexistence, among Lebanon's often fiercely divided religious communities. If it can work in Lebanon, it could work anywhere.

"We need to shift which 'heroes' we learn about. We started a platform which means hero in Arabic - short stories about people who are going against the current and deserve to be called a hero, in comparison to Daesh [ISIS]. Our research found that young people considered Daesh to be heroes because they do what they believe in whereas others only talk about it." - Father Fadi Daou, in a podcast interview with Tom Fletcher.

Graham Brown-Martin - the advocate

Graham has been on the frontline of these arguments for some time, making the case for a reimagination of education. He has stuck at it tenaciously as others have come and gone, consistently martialing the facts and picking the right arguments. As vested interests dig in, he is someone who can help to corral and convince people of why change is necessary.

Goldie Hawn - on a mission for mindfulness

Goldie has long practised mindfulness and promoted wellbeing. But it was after 9/11 that she realised that this was a campaign that needed to be felt far beyond California. Through her Foundation, she is now working hard to find partners to translate a mindfulness curriculum into more languages, including Arabic. Pioneering educators in the Middle East and beyond are recognising the potential of such a programme. Watch this space.

Tara Swart - ensuring our brains are prepared for the challenges ahead

As a neuroscientist, Tara really understands the brain. But unlike most neuroscientists, she can really explain it. What she shares is that all of us face an urgent need to take better care of our brain health, particularly amid the sensory bombardment of the digital age. As parents and educators become more worried about the negative effects of exposure to digital technology, she is a thought leader who can help guide us as to what balance to strike, to ensure that learners make the technology work for them, and not the other way round. In our podcast, she told us

"The illiterate of the 21st century won't be those who can't code, but those who don't solve problems using a combination of computational thinking with empathy, intuition and creativity". Already she sees the way that education is falling behind changes to our brains. "Our children are growing up in a world where they are constantly multitasking. And we've already seen that our memory and concentration centres in the brain have started to shrink. We don't remember things because we don't need to. And that leads me to the crux of the problem: education hasn't changed at all to keep up with the way the world and our brains are changing."

Efosa Ojomo - making compassion more effective

One of the most useful debates sparked by our conversations has been 'What is education for?' Efosa Ojomo from the Christensen Institute has just launched a brilliant book - 'The Prosperity Paradox' - he had a similar analysis of the problem, but a different perspective than many of our other interviewees on the balance in that debate.

"Instead of educating kids with the hope that they find some job somewhere, you have to look at the needs of the economy, and work backwards - that's an uncomfortable thing to do but that's how we've always done it. Some people will say, how can education be dictated by private sector, education is a human right, there is value in education in its own right. There *is* inherent value in learning, but there is a significant cost, and somebody has to pay for that learning, and if we don't find a model for how to pay for it, there's not going to be any education at all." - Efosa Ojomo, in an interview with Tom Fletcher.

Loubna Hadid, Decenture

A blockchain pioneer, Loubna is also driven by a passion for education. Among those we have met, she stands out as wanting to use the immense technological potential he is developing to make a genuine difference in people's lives. Blockchain will in the coming years reshape the way that schools and universities manage their operations. It could also provide the answer to the accreditation challenge we identify in this report. If learners can carry with them a digital recognition of the skills and knowledge they have developed, that can have credibility with future employers and others. It would mean the disruption of national control of educational qualifications.

Anthony Seldon - the handstand headmaster

New arrivals and their parents at Buckingham University - ranked No 1 of the UK's private higher education institutions - are probably not expecting the Vice Chancellor to perform part of his welcome standing on his head. But Anthony is not a conventional education leader. He has written pro-

lifically about the importance of teaching wellbeing, and put his ideas into practise through groups such as the International Positive Education Network and as a Board member on this project.

"We're still in this third stage, the factory model of education. Very few people in education ministries around the world have explored what education is or can be - what it means to be human. This needs to be understood more clearly as we are now entering the fourth education revolution, which is the most important revolution for 500 years: artificial intelligence is altogether different from what happened earlier." Anthony Seldon, in an interview with Tom Fletcher.

Sarah Zeid - advocate for the voiceless

Sarah is a TGLG board member. As an activist for women and children in the toughest of environments, she has brought extraordinary tenacity and courage to the global education effort. She has helped us understand that the next leap forward in global education has to prioritise those currently denied a decent education. And that nothing will succeed unless we convince parents of the need to change.

Jairaj Mashru - making tech work for education, and education work for tech

Another TGLG board member, Jairaj is an Innovation Executive at Salesforce, and has donated his time to the project as part of Salesforce's pioneering scheme for employees to support initiatives of social value. Jairaj has built an impressive network of Indian education pioneers, of great interest given that India will be the laboratory in which many of the most interesting innovations are tested - combining as it does a dynamic entrepreneurial sector and a formal education system that has so far been slow to adapt. Jairaj has also brought to the project a strategic rigour to focus where we can add genuine value.

Randa Grob-Zakhary - connecting the dots

A former brain surgeon, Randa has a forensic ability to map the global education sector and make connections that no-one else sees. As a TGLG board member, she has also brought to this project her networks and belief in the importance of working with existing research. The global education sector needs people who can make the linkages between so much brilliant but disparate activity. No-one does that like Randa.

Baan Dek Foundation - digital superheroes

The Baan Dek Foundation, an NGO based in Northern Thailand, established the Digital Superheroes Academy to teach slum children essential life skills, in the form of superpowers. But unlike the many institutions which focus on 21st century skills, the Academy works on a more practical set, including internet safety, and dealing with discrimination and domestic violence. These are the educational needs that are most needed among the vulnerable communities they are working with. This focus on practical life skills should not be unique to poorer populations. Traditionally these were taught at home and in the community.

13 Global Learning Goals: The Next Frontier

'Tradition is not the worship of ashes, but the preservation of fire.' (Mahler)

We hope this journey sparks questions, challenges, ideas. It seems to us that there can be few more pressing issues than transforming learning to meet the rapidly changing needs of humanity. We hope you'll feel that too.

Since April 2017, we have worked hard to build the research base, network and advocacy to give a platform and a voice to education pioneers, and to promote new partnerships for change between educators, governments, businesses, parents and learners. Alongside the eight reports discussed in this piece, highlights include events on the university of the future, a podcast promoting new models of education, a global student hackathon on the curriculum of the future, a new platform matchmaking educators and potential supporters, and the creation of the Global Tech Panel. We have reached over half a million people with our messages. Our reports were downloaded, videos watched, podcasts listened to and tweets shared over 30,000 times, by people from the World Bank to Indian edtech startups to education ministries from Canada to the Canary Islands.

This report makes a number of specific recommendations:

a. A UN Declaration of Principles on global education reform.

b. A coalition of education's pioneer countries around global learning goals and social/emotional learning.

c. Widen support for the work of Andreas Schleicher and the OECD on Global Competence.

d. Design the university of the future, which places greater value on character and skills in recruitment, teaching and assessment; gives more space and support to the pioneers; and leads the debate on ethics in the Digital Age.

e. Accelerate efforts among educators to move from a standardized view of intelligence to nourishing diverse and authentic forms of intelligence; from defining institutional excellence by how many people are left out in selection processes to taking pride in reaching for inclusion; and from ignoring technology's potential for disruption in education to deliberately harnessing its virtues and minimizing its vices.

f. A Global Creative Alliance to press for creative education.

g. Design a credible global assessment of learning potential.

h. Design a course in human development, from cave paintings to the driverless car.

i. A new global network of champions of educational reform.

j. A Global Learning Goals Hub, a platform that gathers in one place the great examples of innovation and creativity in teaching knowledge, skills and character.

k. Expansion of the GBC-Ed Rapid Education Action database, linking business support with educators on the frontlines.

l. A network of young people to build a campaign among learners.

m. Further develop innovative financing for education, including social impact bonds.

n. An education entrepreneurs pledge: to do no harm. Innovation should clearly provide an advantage to what it replaces. It should be compatible with the customer environment. It should not be too complex to use. Its benefits should be observable, with low risk in adoption. It should be easily divisible, to enable it to be piloted, tested and refined without damage to learners.

o. Rapid development of platforms like LearningCloud, with free, high quality content.

p. Robust global assessment standards against which to measure progress, including on skills and character.

q. Business to share ways to pioneer of new training and assessment in 21st Century skills and competences.

r. Broaden campaign and support for International Positive Education Network.

s. Widen adoption of International Baccalaureate.

In the next phase, we will also focus on the niche where we can add most value in the global education space: *diplomacy.*

So we plan to:

- nurture a network of twenty influential education sector champions of change, through bespoke advice, communications support and networking;

- create and share innovative new content that makes the case for education of the whole child, including through a podcast, book, and documentary proposal;

- support existing initiatives that could have the highest impact (the Global Tech Panel, REACT, university of the future, Global Creatives Alliance and the promotion of social and emotional learning across the Gulf region).

We need to co-invest in opportunity, so that our children, wherever they are born, can access the most important knowledge that humankind has built, and develop the skills and character to thrive, adapt, learn, create, invent, and coexist as global citizens.

And we need your help. Parents can engage schools on the need for more focus on skills and character. Businesses can help educators develop the learning that is most needed for the challenges of the 21st century, and work with educators to ensure that innovation does no harm. Governments and international organisations can adopt the changes we have described. We can all get behind our educators, and the pioneers who are showing the way. Above all, learners can lead the next transformation of global education.

Change will not be straightforward or easy. But it is *vital*. And it is coming.

Please be a part of it.

Towards Global Learning Goals

Dear Tech,

We need to talk about education.

We think we are all agreed that everyone has equal right to access the opportunity of the internet. And that the generation who will become adults in the 2040s face a future we cannot yet comprehend.

They will have to invent jobs we can't imagine. To be brave and curious enough to master technology rather than be mastered by it. To be kind enough to reduce inequality rather than widen it.

But the current global education model is falling. 75m are out of school, and most of those in education are learning the wrong things in the wrong ways.

So we need a learning reawakening to develop the knowledge, skills and character to thrive in an era of technological and social upheaval.

Governments can't lead this work, certainly not in a way that is sufficiently agile. Neither can a UN system that is under-resourced and under attack.

So we need a new coalition of innovators, pioneers and educators, working together towards global learning goals of the head, hand and heart.

Technology can be the platform for a great leap forward in not just what we learn, but how and why we learn. Already, you are disrupting how content is generated and shared. You can find ways to get the best resources into the hands of tomorrow's Einsteins, Jobs and Curies.

We all need to rediscover that we are educators. We need to co-invest in opportunity.

Please be part of that effort. Please apply the brightest minds we have ever had to the greatest challenge we have always had – preparing the next generation to do better than us.

So that our children, wherever they are born, can access the most important knowledge that humankind has built, and develop the skills and character to thrive, adapt, learn, create, invent, and coexist as global citizens.

Over to you?

We look forward to discussing these ideas, and how best to further support your vital work.

Tom Fletcher

Tom Fletcher CMG
Project Director
Towards Global Learning Goals

Towards Global Learning Goals

Open Letter to the United Nations

As UNSG's Envoy for Global Education, Gordon Brown has rightly set us the ambition that 'we could be the first generation in history where we develop the potential of every person all over the world'. This reinforces the UN's four pillars of learning: to know, to do, to live together and to be.

You invited ideas from our team on how the wider UN system can engage the growing movement for global learning goals.

The UN has helped win the argument that education is an indispensable part of the response to the challenges that now face humanity. Education is a new battle line: between those who want equality of opportunity, and those who fear it. In a more human, digital and connected world, it will be harder for national governments to retain a monopoly over what young people learn. This liberation of education is a huge opportunity. It can spread freedom to learn, move, think and innovate. But if we are not vigilant, it could also spread division, distrust, factory education and inequality.

The fragility of the world order makes it harder for the UN to be part of the solution. But there are no challenges more demanding of the UN's attention. The generation who will become adults in the 2040s will have to invent professions that we can't imagine. To be brave and curious enough to master technology rather than be mastered by it. To be kind enough to reduce inequality rather than widen it. Wherever they are born, they must therefore have access to the most important knowledge that humankind has built, and develop the skills and character to thrive, adapt, learn, create, invent, and coexist as global citizens. This demands more social and emotional skills, based on education of the head, hand and heart, and the cultural awareness to work with those from different cultures and backgrounds.

Our research suggests that the UN could best support a transformation of not just who learns, but what we learn in six ways:

● the establishment of an 'education pioneer' network of governments, to share best practice. We believe Singapore and/or Finland are best placed to convene this group, mandated by the UNSG;

● a Whole Child Development Education Index, supported by the OECD, to create healthy competition and collaboration between national governments on social and emotional learning. This would need to fully reflect the strengths that many lower income countries have in developing character;

- a stronger global mechanism, led by UNESCO and Global Partnership for Education, for sharing national education best practices for social and emotional learning;

- the expansion of Whole Child Development as part of the UPR process for the Convention on the Rights of the Child;
  encouragement of development partnerships involving pioneer countries (many of which will be lower income) to not just support access to education but nurture social and emotional learning. The new innovative financing tools, including IFFED, can be a great springboard for this work;

- strong and visible UNSG support for the 'islands of opportunity' - great examples of innovation such as the OECD's '21st Century Competencies', Education Can't Wait and UNICEF's Learning Passport.

We look forward to discussing these ideas, and how best to further support your vital work.

Tom Fletcher CMG
Project Director
Towards Global Learning Goals

Towards Global Learning Goals

Our EdTech Manifesto

1 Silicon Valley is founded and sustained on the idea that it is on the right side of history. But it now recognises that - like governments, banks, the media and so many more - it now finds itself on the wrong side of the trust deficit. There is still great confidence that it will generate the ideas and innovations that take humanity forward. But a series of high profile exposures, coupled with increasing awareness of the malign political impact that technology can have, now place the entire ecosystem on the back foot.

2 This creates a great opportunity for new business models to emerge that place social value more consistently and explicitly at their core. And for tech companies to engage other actors on genuinely collaborative problem solving, rather than simply disruption. This is therefore the right moment to be pitching a new coalition approach to education. Annex 1 is the short version of this.

3 Technology will find, without much help, the best ways to get educational content to future learners: there are a myriad of methods to do this, and the most effective ones will rise to the top. For a period this will be a mixture of commercial and philanthropic interventions. Governments will be among the beneficiaries, but struggle to do more than validate the best.

4 We are within a decade of being able to see a digital library of the world's most important knowledge, presented in accessible ways, free to the user. So as the next billion come on line, they will have better access to knowledge not just than than Einstein, but than Steve Jobs. This is more significant than any other moment ever in reducing the barriers to information, including the printing press.

5 For most people in the Tech world, the arguments over the need for more social and emotional learning are already won. Just look at the schools they are sending their kids to - problem solving, team working, critical thinking and creativity are prioritised over remembering things or passing classic exams.
But even so, beyond a handful of pioneer schools in expat communities and elite areas, the current systems won't change fast enough for the new job market - for tech businesses or those they will need to employ. We face a new digital divide, where only a small percentage of the global elite can educate their children in the right ways.

6 In the meantime, businesses will invest increasing amounts in companies that effectively re-train their employees for them, online and offline. Rather than fixing the symptoms of the education crisis, they will simply pay more for the treatments. They will see the

education system itself as too bureaucratic, too hard to reform. They will select applicants despite, not because, of their education. And seek to re-wire them. The next generation of CEOs could/should be Chief Learning Officers.

7   Some governments have the vision and resource to adapt. They will tend to be smaller countries, more agile, with less bureaucratic/historical baggage, often with lots of coast line. Their citizens will be the global elite of the 2040s, filling the top international positions and dominating the global economy.

8   Meanwhile, elsewhere, parents and, increasingly, young people, are going to start to migrate to new content and new tools, as they see that they can achieve their educational objectives faster outside formal education. This will hit the university system first, and hardest. But we are within a decade of younger people dropping out of school in order to learn faster. Migrant and refugee communities could be among the trailblazers.

9   In this context, assessment and accreditation will become much more important. People will still need to validate their learning. Will a Google Degree become more valuable than a degree from Cambridge? Eventually this leads to greater equality of opportunity, but there will be a period of flux and complication. How do we ensure credibility and quality for education outcomes in the context of a free for all?

We look forward to discussing these ideas, and how best to further support your vital work.

[signature]

Tom Fletcher CMG
Project Director
Towards Global Learning Goals

14 About the TGLG Project Team

1. Project Director, Tom Fletcher CMG

Tom is a former UK Ambassador, and foreign policy adviser to three UK Prime Ministers. He is now a Visiting Professor at New York University Abu Dhabi, an Honorary Fellow of Oxford University, and adviser to the Global Business Coalition for Education and Emirates Diplomatic Academy. 'Naked Diplomacy: Power and Statecraft in the Digital Age' was published by HarperCollins in June 2016.

2. Project Coordinator, Rebecca Cox

Rebecca is Chief of Staff to Tom Fletcher. She is an experienced Executive Assistant with over 10 years' experience working at ministerial level and managing small teams. She is the former Executive Assistant to the Deputy Prime Minister, The Rt Hon Nick Clegg MP (between May 2014-July 2015) in the lead up to the 2015 General Election. She has worked in a number of UK government departments, including the Attorney General's Office, the Crown Prosecution Service, and Her Majesty's Revenue and Customs.

3. Report Editor, Jeremy Chivers MBE

Jeremy is a conflict analyst and development programme manager. He spent 19 years in the Middle East designing and delivering development programmes for the British Government. He has also worked in UN refugee relief operations. He is now a development consultant based in Beirut, Lebanon, and in 2018 published a photographic study of the Lebanese Armed Forces entitled 'The Heart of the Nation'. As a lifelong learner, he has also recently completed postgraduate studies at Oxford University, focussing on strategy and innovation.

4. Communications and Outreach, Angela Solomon

Angela is a social entrepreneur, communicator and former British diplomat, based in Beirut, Lebanon. She helps organisations tell authentic stories. She is also co-founder of an award winning tech driven social impact business that helps women work.

Be Kind, Be Curious, Be Brave

5. Advocacy Expert, Sho Konno

Sho is a communications consultant for activists. He has a background in public policy and PR, as head of comms for an international NGO, and as advisor for unfashionable causes from Chechnya to prison reform. He has run comms workshops for activists in over 15 countries, from LGBT rights campaigners in Bangladesh to migrant workers in Lebanon and young women entering politics in Malawi.

6. Project Officer, Sally Mansour

Sally is an advertising and communications graduate based in Beirut, Lebanon. Since leaving education, she has worked in various communications roles in a range of fields, from non-profit organizations to the commercial sector. Sally manages the TGLG project office and coordinated the complex logistics for our global analysis team.

7. Lead Policy Analyst, Lorraine Charles

Lorraine is a PhD candidate at the Institute of Arab and Islamic studies at the University of Exeter. She has conducted extensive research in politics, political economy, development and education in the Middle East. She has published in several journals including Middle East Journal and the Journal of International Women's Studies. She is a contributing author in manuscripts published by Routledge and Gerlach Press, and is currently the co-editor of a book on Middle East research methods to be published by Edinburgh University Press.

8. Policy Analyst, Mario Zapata

Mario Zapata is a summa cum laude graduate in public policy and political science of NYU Abu Dhabi. He has conducted research and analysis in more than a dozen countries, for organisations including the Government of Abu Dhabi and the Mission of Costa Rica to the UN. He is passionate about solving the policy challenges presented by the future of work, globalization, and social inclusion.

9. Policy Analyst, Chris Wheeler

Chris is a senior Political Science student and student Vice-President at NYU Abu Dhabi. Originally from the UK, he has now studied and worked on five continents, including at the United Nations and Human Rights Watch. He has been involved with a number of initiatives to provide mobile employment and education to Syrian refugees, and was a contributing author on the United Networks report for the UN Secretary General.

10. Assistant Policy Analyst, Tiril Rahn

Tiril majors in political science with a minor in peace studies and public policy and management at New York University Abu Dhabi. She has studied on four continents and worked on issues such as countering violent extremism, refugees, education and peace resolutions.

11. Assistant Policy Analyst, Katarina Holtzapple

Katarina is a third-year student at NYU Abu Dhabi double majoring in Social Research and Public Policy and Film, with a focus on education. She has worked with local associations in promoting youth entrepreneurship through in-school workshops and presentations in Croatia, developed and implemented language immersion curricula in South Africa and international summer camps, and has volunteered with New York City NGOs supporting students from underfunded schools.

12. Designer, Dima Boulad

Dima Boulad is a Lebanese designer working in design research and motion graphics. Dima co-founded Beirut Green Project, a grassroots movement that was born from the need to raise awareness on the importance of having public green spaces in Beirut. Dima designed the TGLG brand book and the look and feel of the project materials.

For more information about this report, or TGLG, please contact: info@globallearninggoals.com

15 Experts Interviewed

1. Tarek Abu Fakhr
Advisor, Director General Office, Ministry of Happiness of the United Arab Emirates

2. Prof. Reyadh Almehaideb
Vice-President, Zayed University, UAE

3. Baroness Valerie Amos, CH
Director, School of African and Oriental Studies (SOAS)

4. Alex Asseily
Co-founder, Jawbone

5. Dr Douglas Bourn
Director of Development, Education Research Centre, UCL, UK

6. Dr. Joshua Broggi
Academic & Founder of Woolf (First Blockchain-Powered University)

7. Sarah Brown
British campaigner for global health and education, founder and president of the children's charity Theirworld, the Executive Chair of the Global Business Coalition for Education and the co-founder of A World at School

8. Tony Bury
Founder & Trustee, Mowgli Mentoring

9. Federica Busa and Hind Al Owais
Dubai EXPO 2020

10. Dr. James Cambridge
Independent international education consultant and former Head of Research Projects at International Baccalaureate Research Unit

11. Julie Chappell
Former UK Ambassador to Guatemala, and Young Global Leader with the World Economic Forum

12. Madhav Chavan
Co-founder and CEO of the educational non-profit, Pratham

13. Helen Clark
Former Prime Minister of New Zealand, and Administrator of the United Nations Development Programme

14. Sir Nick Clegg
Former Deputy Prime Minister, UK

15. Sean Coughlan
BBC News Education Correspondent

16. Michael Curry
Co-Founder of AVADO, and Ed-Tech Partner at Blenheim Chalcot

17. Nicholas Davis
Head of Society and Innovation, World Economic Forum

18. Tariq Fancy
Founder, Rumie Initiative

19.Ed Fideo
Co-Founder of School 21

20. Justin van Fleet
Chief of Staff to Rt. Honourable Gordon Brown, in the Office of the UN Special Envoy for Global Education

21.Simon Franks
Founder, the Franks Family Foundation

22.Dr Randa Grob-Zakhary PhD, MD

Neurosurgeon, and Global Head of Education, Porticus. Board Member of the Global Partnership for Education at the World Bank

23. Loubna Hadid

CEO & Founder, Decenture

24. Nick Hillman

Director of Higher Education Policy Institute (HEPI)

25.Will Hutton

Principal of Hertford College, University of Oxford, and Chair of the Big Innovation Centre. Formerly editor-in-chief for The Observer newspaper

26. John Kampfner

Chief Executive, Creative Industries Federation

27. Dr. Amel Karboul

Former minister, and CEO of the Education Outcomes Fund for Africa and the Middle East

28. Baroness Beeban Kidron

Member of House of Lords, Chair of 5 Rights Foundation

29. Guy Mallison

Chief Executive and Principal, Blenheim Chalcot New University

30. Jairaj Mashru

Director of Customer Innovation, Salesforce, TGLG Steering Advisory Board

31. Monica Mehta

Director, Education, Omidyar Network India

32. Cynthia McCaffrey

Director of the Office of Global Innovation, UNICEF

33. Kevin McAndrew

Director, Partnership, Innovation and Strategy, Save the Children

34. Emran Mian

Director of Strategy and Social Mobility at the Department of Education

35. Sara Monteabaro

Senior Officer, MIT Solve Learning Pillar

36.Aditya Natraj

Founder and director of Piramal School of Leadership Kaivalya Education Foundation, Ashoka Fellow, India

37. Tareq M. Al Otaiba

Office of Strategic Affairs, Abu Dhabi Crown Prince Court

38. Fabio Piano

Provost, New York University Abu Dhabi

39. H.E. Sheikha Lubna Al Qasimi

President, Zayed University, United Arab Emirates

40. Sir Ken Robinson

sirkenrobinson.com

41. Allison Sanders

Digital Super Heroes Academy/Thailand

42. Sir Anthony Seldon

Vice Chancellor of Buckingham University, UK, TGLG Steering Advisory Board

43. Prof. John Sexton

President Emeritus of New York University, USA

44. Emma Sinclair

Businesswoman, entrepreneur, and journalist. Co-founder of EnterpriseJungle

45. Paul Thompson

Employer and Skills Manager at SEMLEP School 21 - Edward Fidoe

46. Andy Westwood

Professor of Government Practice and Vice Dean of Humanities, University of Manchester

47. Dr Rebecca Winthrop

Senior Fellow, Director of the Center for Universal Education

The Brookings Institution

48. HRH Princess Sarah Zeid of Jordan

Co-Chair of Every Woman Every Child EveryWhere, UNHCR Advisory Group on Gender, Forced Displacement and Protection, TGLG Steering Advisory Board

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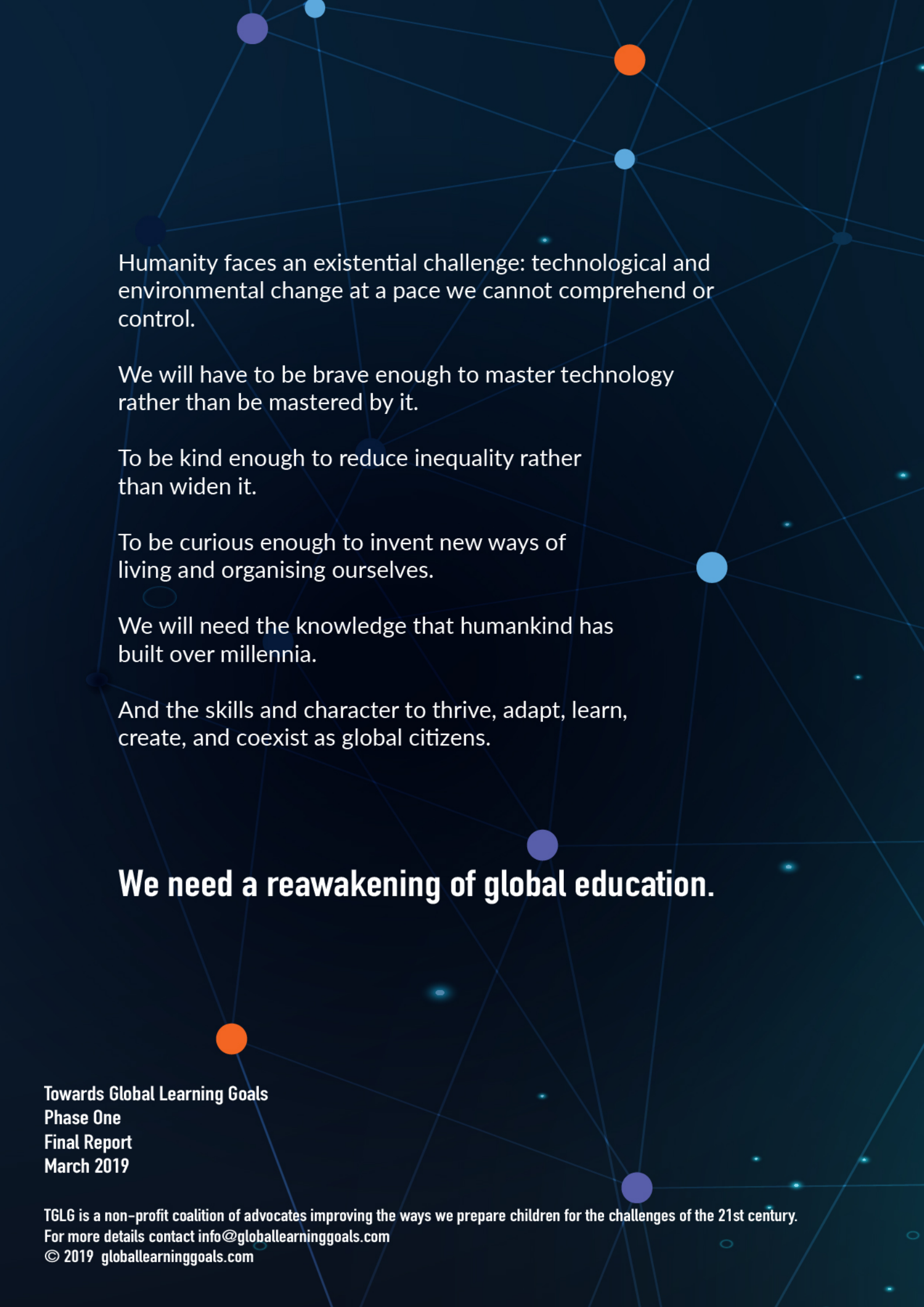
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Humanity faces an existential challenge: technological and environmental change at a pace we cannot comprehend or control.

We will have to be brave enough to master technology rather than be mastered by it.

To be kind enough to reduce inequality rather than widen it.

To be curious enough to invent new ways of living and organising ourselves.

We will need the knowledge that humankind has built over millennia.

And the skills and character to thrive, adapt, learn, create, and coexist as global citizens.

We need a reawakening of global education.