

Yidan Prize
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What is innovation in education?

Yidan Prize Conference Series: Europe
28 May 2021

In partnership with the Department of Education, University of Oxford



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Ms Lucy Lake

Chief Executive Officer, CAMFED

Ms Angeline Murimirwa

Executive Director—Africa, CAMFED

Professor Harry Daniels

Professor of Education at the Department of
Education, University of Oxford

Ms Vicky Colbert

Foundation and Director, Fundacion Escula
Nueva (FEN)

Moderator

Dr Susan James Relly

Associate Head (Education), Social Sciences
Division,
Director, SKOPE Research Centre,
Associate Professor, Department of Education,
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Speakers

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Professor of Physics and Graduate School of Education and DRC Chair, Stanford University

Professor Sibel Erduran

Professor of Science Education, Director of Research in the Department of Education; and Fellow of St Cross College at University of Oxford

Professor Thomas Kane

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Professor Larry Hedges

Chairman of the Department of Statistics, Northwestern University

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Director of the Department of Education,
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Executive summary

On 28 May 2021 we celebrated our 2020 Yidan Prize laureates at our European conference. Education Research Laureate [Professor Carl Wieman](#) of Stanford University and Education Development Laureates [Ms Lucy Lake](#) and [Ms Angeline Murimirwa](#) from CAMFED (Campaign for Female Education) joined us for the virtual event. Our founder, Dr Charles CHEN Yidan, launched the prize in 2016 to support ideas and practices in education—specifically, ones with the power to positively change lives, systems, and society. It also builds a platform to bring the best thinkers together and shape the future of education globally.

Our theme was **'What is innovation in education?'**—timely, given the way educators all over the world changed their ways of thinking and working, responding creatively to the pandemic. We held the conference virtually, meaning we could reach an even broader audience than usual, with over 1,000 registrants from 114 countries. Over 400 logged on to conference sessions as they happened.

We also launched the inaugural Yidan Prize Doctoral Conference

Held the day before the rest of the conference, this event looked to the future: what could or will education look like? [Professor Rebecca Eynon](#) from the University of Oxford gave the keynote, reminding us to be cautious about how much we rely on technology. If we're not careful, she warned, we'll sleepwalk into a world where robots and algorithms define learning goals and behaviours—without considering the consequences. Students also heard from Lucy and Angeline, who encouraged them to continue aspiring to rigour in research and bringing young people's voices to life.

50 doctoral students from universities around the world submitted anonymized abstracts. Our panel of experts chose 20 to present their work. After the conference, we gathered papers from them based on their presentations and published them in the first Yidan Prize Doctoral Conference Proceedings.

Get the highlights or re-watch the sessions

Read on for highlights from our keynotes and panel discussions. You can re-watch any of the conference sessions, as well as the opening and closing keynotes of our doctoral conference, [here](#).

Welcome remarks



In his welcoming remarks, our founder, Dr Charles CHEN Yidan, honored the 2020 Yidan Prize laureates. He highlighted our foundation's work creating collaborative networks of education researchers and practitioners, and recognizing the most innovative practices and thinking in education. He encouraged participants to think about how to approach innovation differently, and argued that innovation needs to be sustainable to create long-lasting, transformational experiences for young people for generations to come. Successful innovations also scale, and Dr Chen marveled at creative approaches to teaching and learning coming out of the pandemic. He urged us to think about how to use these solutions and ideas to address gaps in both developing and developed nations that were widened by the pandemic.

He encouraged participants to think of education as the tool to drive real social change—something that should never stop, even in the face of great challenges.

“The Yidan Prize recognizes the most innovative research and practices in education. In the past year, we have seen many agile and innovative educational solutions sparked by the challenging circumstances of the pandemic. This is what we seek to find and celebrate, bringing together brilliant minds to create a better world through education.”

Dr Charles CHEN Yidan

Founder, Yidan Prize



Opening remarks

Professor Louise Richardson, Vice-Chancellor of the University of Oxford, first met Dr Chen in December 2016 in Oxford where he shared his vision for education. This was also the year he established the prize and she acknowledged her joy at seeing Dr Chen's vision for education coming to life, and the importance of the recognition of education research.

In her comments, the Vice-Chancellor emphasized that innovation in education has never been more important. The pandemic has highlighted huge discrepancies in educational attainment and equality of opportunity is now even more difficult to achieve. Through innovation in education we can begin to close the gap.

She spoke about how Professor Carl Wieman is transforming STEM education by using new methods in college-level science teaching.

She also acknowledged Ms Lucy Lake and Ms Angeline Murimirwa's contribution to female education. Their organization CAMFED has pioneered strategies to keep marginalized girls in school, benefiting over six million young people.

They are deserved laureates of the Yidan Prize and Professor Richardson sent them warm congratulations.

Professor Richardson also drew attention to the inaugural Yidan Prize Doctoral Conference. She underlined the importance of this addition to the Yidan Prize Conference Series, created to inspire and recognize the world's next generation of leading education researchers:

"As a leading research intensive, multi-disciplinary university, we pride ourselves on supporting exactly this type of talent and are glad that the Yidan Prize Foundation share this vision."

Professor Louise Richardson

Vice-Chancellor, University of Oxford

What is innovation in education?

Dr Sobhi Tawil's keynote address drew attention to the philosophy of innovation—what it means, and what we want to achieve. He reminded us that innovation is really a vehicle for better educational and social opportunities. Equity, he argued, is the key criterion and lens for deciding whether to innovate. Some of the things we call innovation may in fact be unnecessary disruption. Dr Tawil drew upon an example in the US which showed that only 20% of the interventions in a highly funded program had a positive effect on student learning. He also argued that innovation is expected to be transformative in a way that changes things overnight, but this, he said, treats education as the same as a field like technology—but it's not.

Social and educational change is more incremental—it needs long and concerted effort. Massive Open Online Courses (MOOCs) did not transform higher education or open it to everyone overnight. People are what makes education. He also cautioned us to recognize that people, not technology, drive innovation. We're so used to thinking of innovation as technological that we fail to see our most important innovations for what they are. For example: how schooling has been more inclusive to the poor and to girls—these are important innovations, but nothing to do with technology.

“We mustn't lose sight of the ultimate goal of improving equity and quality... Innovation in and of itself is not the end goal. It is a means towards our goal.”

Dr Sobhi Tawil

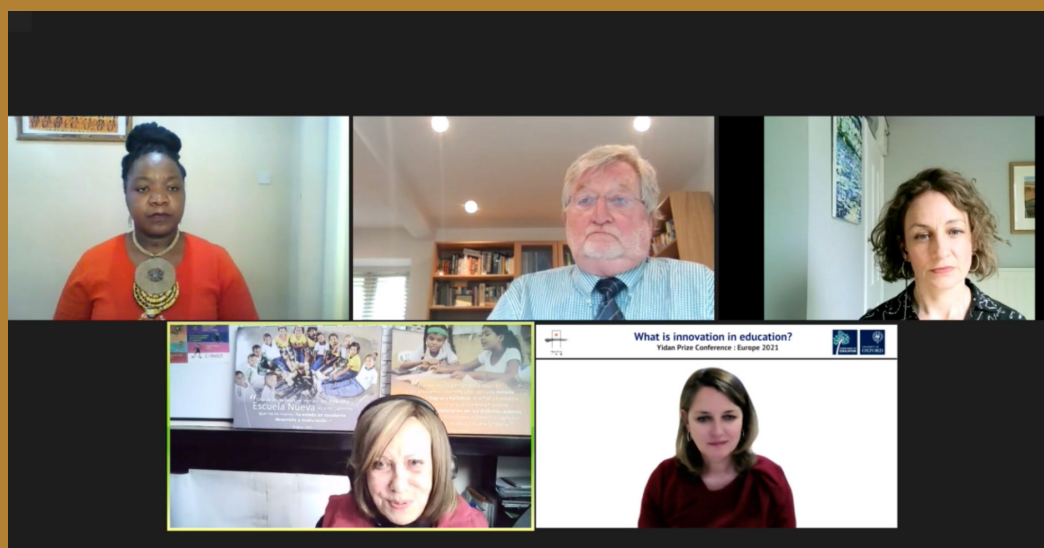
Director,
Future of Innovation and Learning, UNESCO



How motivation affects behaviour— a human-centric approach

- **Ms Vicky Colbert**
Founder and Executive Director,
Fundacion Escuela Nueva (FEN)
- **Professor Harry Daniels**
Professor of Education at the Department of
Education, University of Oxford
- **Ms Lucy Lake**
Chief Executive Officer, CAMFED
- **Ms Angeline Murimirwa**
Executive Director-Africa, CAMFED
- Talking to
Dr Susan James Relly
Associate Head (Education), Social Sciences
Division,
Director, SKOPE Research Centre,
Associate Professor, Department of Education,
University of Oxford

Bringing together leading voices in education research and development, this panel showcased examples of why a human-centred approach is essential in education. They challenged us to consider the importance of making schools more inclusive, through a variety of different practices to make schools safer and better understand young people's mental health concerns. Inclusion also helps schools build stronger links with their communities. Our panellists shared two core beliefs: that vulnerable children have a right to quality education, and that quality education for all is the best way to solve inequality.



(From left to right, top to bottom) Ms Angeline Murimirwa, Professor Harry Daniels, Ms Lucy Lake, and Ms Vicky Colbert talking to Dr Susan James Relly

Ms Lucy Lake's work with CAMFED in sub-Saharan Africa challenges assumptions that girls leave education early because they're not motivated. While there are also factors outside school, school systems frequently fail girls—actively excluding them. Lucy pointed out that school systems set up to genuinely serve the needs of girls create a better learning environment for all. Educating girls also has a positive knock-on effect on equality, health, justice. It makes for stronger citizenship because “most importantly, at a psychological level, inclusion is power”!

“Building a girl’s self-esteem and self-worth, her sense of who she is and what she is entitled to is integral to her enfranchisement in the school system.”

Ms Lucy Lake

Chief Executive Officer, CAMFED





Ms Angeline Murimirwa talked about CAMFED's 'Learner Guides'—a group of young women who volunteer as mentors in local secondary schools to keep girls in education. Crucially, they've experienced exclusion, and are experts in what it takes for a marginalized girl to attend school, learn and succeed. Learner Guides understand the lived realities of poverty and the daily practical and psychological impact. As a living example of what's possible, they support the next generation and are "unapologetically involved and invested in the lives of the girls".

Learner Guides build bridges between schools and the community, and follow up on girls who have dropped out of school. They work with teachers and principals, running study groups and delivering a life skills and wellbeing curriculum co-designed with young people, called 'My Better World', which is relevant to students' lives, speaks to their experience, and helps build students' confidence and academic self-esteem. Because of this close, active collaboration, the program has won both local community buy-in and partnership with Ministries of Education and Social Services at district and national levels—proof that a learner-centred approach makes this world a better place for everyone.

"It makes a huge difference in a girl's motivation and outcomes when we are responsive to individual needs."

Ms Angeline Murimirwa

Executive Director—Africa, CAMFED

For **Professor Harry Daniels** it's just as important to understand negative motivations: what makes people miss out on education? If we can understand that, we can create a better schooling culture, and prevent the harmful political, social, and economic consequences of isolation and marginalization. The pandemic has made us all familiar with at least some of those, including on people's mental health. Harry underlined the interconnectedness of learning, relating, and belonging, and made a call for research to better understand the underlying factors that demotivate young people in education. He highlighted two. One of is the extent to which students feel accepted, respected, and supported by their teachers and classmates. The second issue is justice: whether young people feel that they're being treated fairly is, Harry says, a central part of what demotivates learners. And that fairness applies to different parts of their experience: the culture, the processes they go through, and the outcomes they see. He asks us to think about how policy and practice should change to make schools a safer and better place for learning.

"If we can understand what motivates some of the institutions and individuals and the processes of missing out on education, then we'll be able to respond better, and make some progress towards improving the cultures of schooling."

Professor Harry Daniels

Professor of Education at the Department of Education, University of Oxford



Ms Vicky Colbert from Fundación Escuela Nueva outlined the various ways in which their school network transformed young people's experiences in Colombian schools. Escuela Nueva evolves teachers into mentors and facilitators; the Escuela Nueva schools promote active, cooperative and personalized learning and leadership in children. The philosophy is to change the learning environment, teaching and learning to move away from just transmitting knowledge—instead creating new child friendly cultures of learning. In this manner, teachers with their new role have more possibilities to know their children more, their different learning styles, help them set goals, support their children to take ownership and build their self-esteem. The combination of self-directed learning, self-regulation, putting children in charge of their learning allows children to better understand their own environment, and become more active members of their community—which is essential. In turn, community expertise also flows back into the school.

“We have to shift this transmission of knowledge and teacher-centred education to child-centred participatory learning so teachers can motivate students to engage and participate, instead of just giving information.”

Ms Vicky Colbert

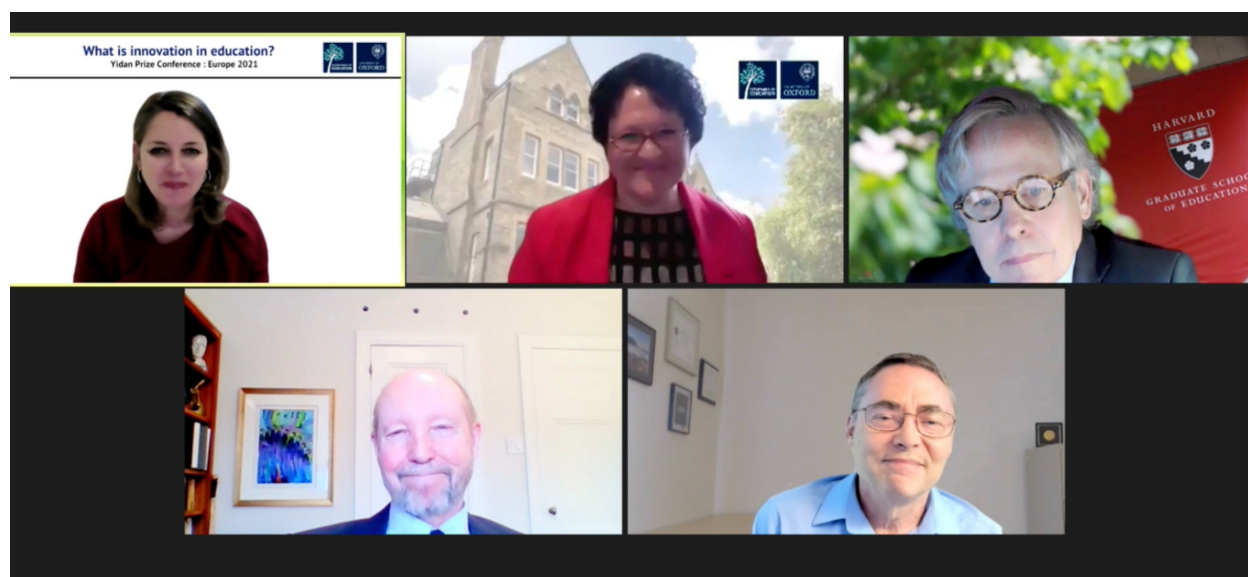
Founder and Executive Director, Fundación Escuela Nueva (FEN)



Innovating methods & systems— a scientific approach to improve teaching

- **Professor Carl Weiman**
Professor of Physics and Graduate School of Education and DRC Chair, Stanford University
- **Professor Sibel Erduran**
Professor of Science Education, Director of Research in the Department of Education; and Fellow of St Cross College at University of Oxford
- **Professor Thomas Kane**
Walter H. Gale Professor of Education, Harvard Graduate School of Education
- **Professor Larry Hedges**
Chairman of the Department of Statistics, Northwestern University
- Talking to
Dr Susan James Relly
Associate Head (Education), Social Sciences Division,
Director, SKOPE Research Centre,
Associate Professor, Department of Education,
University of Oxford

How can we take a scientific approach to improving teaching? That's the big question we put to this panel. Each member is a firm believer in educational research and all call for improved ways of sharing research findings. They encouraged conference participants to use innovative methods to improve teaching and learning, and to think about how to better connect different subjects to foster more innovative thinking in students. The panel also re-affirmed how important it is to invest in teaching, and make sure teacher education is informed by research.



(From left to right, top to bottom) Dr Susan James Relly talking to Professor Sibel Erduran, Professor Thomas Kane, Professor Larry Hedges, and Professor Carl Wieman

Professor Carl Wieman started by reminding us that education researchers are in the process of rethinking not just what science education is, but how to do it. Science is more than just facts. It is a unique way of thinking. His research on teaching science in higher education underlines the importance of a new model for teaching science education. We must use our knowledge of how the brain works and how the process of learning changes the brain, and expands what it can do. Carl's research has shown that problem-solving activities and feedback targeted to individual learning are effective ways to teach science. His PhET Interactive Simulations, now used widely online, make it much easier for students to explore scientific effects than it would be in a standard lab. He pointed out that we still have lots to learn about the most effective and efficient ways to develop students' skills and capabilities—and offer them the best research-based improvements possible in education.

“Our research has shown how to teach differently for better learning. We see that developing new capabilities is achieved by teaching that has the brain intensively practicing the thinking we want to develop.”

Professor Carl Wieman

Professor of Physics and Graduate School of Education and DRC Chair, Stanford University





Professor Sibel Erduran argued that thinking innovatively means thinking across different disciplines. The way we currently teach scientific subjects—often without cross-subject links—leads to disconnected learning and stifles innovation. The pandemic has shown vividly how different areas of expertise can come together powerfully: she drew on an example in Germany where one pandemic management team included a philosopher and a historian as well as scientists and public health experts. Disciplines, she argued, are important but inter-disciplinary approaches are vital for tackling problems that the world faces. Critical engagement of ideas is not a luxury but a necessity in contemporary society. We need to empower students to transfer their scientific knowledge into real-life scenarios. That means transforming teaching from delivering facts to setting learning outcomes that include developing complex skills. In so doing, teachers learn innovative teaching and learning strategies.

“If we’re aiming to support students to function effectively in society as well as their future jobs, we need to ensure that the curriculum encourages cross-subject learning, along with learning about subjects, norms and values.”

Professor Sibel Erduran

Professor of Science Education, Director of Research in the Department of Education; and Fellow of St Cross College at University of Oxford

Professor Thomas Kane argued that investing in the quality of teaching is the single most important thing governments can do to improve students' achievement and later earnings. However, improving the quality of teaching requires changing the way teachers are evaluated and receive feedback, and not simply limiting who goes into teaching. For governments around the globe, the most popular policy lever to improve teaching is to increase the minimum test score or training requirements for those going into teaching—but research shows that a teacher's own test scores and course work has surprisingly little correlation with how effective their teaching is. Improved teaching requires adult behavior change and behavior change requires a shared vision of effective teaching practice, and regular feedback from peers and supervisors, as well as supports and incentives. For instance, in their research, Tom's team learned that giving teachers cameras to record their own lessons and opportunities to discuss the videos with a supervisor allowed teachers to watch their own teaching, and to spot what needs changing.

“Ultimately, to improve student learning, we have to change what teachers do in classrooms... we need to make teaching less of a private creation and more of shared resource, a public good.”

Professor Thomas Kane

Walter H. Gale Professor of Education,
Harvard Graduate School of Education





Professor Larry Hedges spoke to us about evidence-informed approaches to education. He reminded us that there are too many fads and we do not evaluate interventions systematically, or we start evaluation before they've had time to be properly implemented. He argued we might need to be more realistic about how big an impact interventions in education actually have. He also emphasized how understanding research is central to improving teacher training. When teachers understand the methods, values, and practices of research, and the evidence that comes out from it, they can really inform and improve practice. Larry's view of the way-in which teacher education needs to be research-informed resonated well with the approach of the Department of Education at the University of Oxford. He maintained that education research would improve with sustained and co-ordinated investment and argued that evidence is the key to bringing about a better education system for all children.

"I'm optimistic that the evidence system is the key to bringing about a better education for all children, but I don't think it is inevitable that it will. It will require setting realistic expectations and having persistence."

Professor Larry Hedges

Chairman of the Department of Statistics,
Northwestern University

Closing remarks

In her closing remarks, **Professor Jo-Anne Baird** said that hosting the Yidan Prize European Conference in collaboration with the Yidan Prize Foundation, was a privilege for the University of Oxford's Department of Education. Although it wasn't possible to be together in person, holding the conference online meant that the conference was more inclusive as a live event. Over 1,000 people from over 114 countries around the world registered, including teachers, policymakers, charity foundations, universities, and more. More people will watch the conference online—perhaps someone from every country across the globe. This is a real achievement. After all, Dr Charles CHEN Yidan's vision for the Yidan Prize is to improve education everywhere.

Professor Baird emphasized that the theme of the conference, Innovation in Education, is incredibly important. In these days of the pandemic, we've become accustomed to online work and our minds automatically turn to the idea of technological innovation. Dr Chen's contribution to technological innovation is apparent and it is clearly the way of the future, but the Yidan Prize is important for

its recognition of wider forms of innovation. The conference's sub-themes on a human-centric approach to motivation and a scientific approach to teaching recognized the need for broader forms of innovation, related to teaching, learning, and relationships.

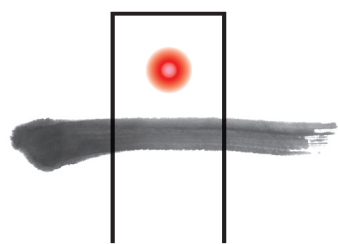
She reminded us of the need to critically evaluate innovation and especially technology. Education is about creating and sustaining social value.

From the Department of Education at the University of Oxford, Professor Baird offered the warmest congratulations to all of the 2020 Yidan Prize laureates: Ms Lucy Lake, Ms Angeline Murimirwa, and Professor Carl Wieman. She wished that their work continues to inspire real innovation in education.

Professor Jo-Anne Baird

Director of the Department of Education,
University of Oxford





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About the Yidan Prize Foundation and Yidan Prize

Founded in 2016 by Dr Charles CHEN Yidan, the Yidan Prize Foundation has a mission of creating a better world through education. Through its prize and network of innovators, the Yidan Prize Foundation supports ideas and practices in education—specifically, ones with the power to positively change lives, systems, and society.

The Yidan Prize is an inclusive education award that recognizes individuals, or up to three-member teams, who have contributed significantly to education research and development. It consists of two awards, the Yidan Prize for Education Research and the Yidan Prize for Education Development. Yidan Prize Laureates receive a gold medal, a cash prize of HK\$15 million (shared equally for teams), and a project fund of HK\$15 million to help them scale up their work.

About the Department of Education, University of Oxford

Oxford has been making a major contribution to the field of education for over 100 years and today this department has a world-class reputation for research, for teacher education and for its master's and doctoral programmes. Our aim is to continue to be a world-leader in cross-disciplinary education research that is closely connected with policy and practice. The department is ranked 4th in the world and 1st in Europe for education subjects.

Our research ranges from early years, through schooling, further and higher education into the workplace. The effects of wider factors such as socioeconomic status, educational effectiveness, parental involvement in education, the effects of being in care and affective factors form key themes in the work conducted across the department. We investigate education in a wide range of disciplines, including English, geography, history, languages, mathematics, medicine, religious education, and science.

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yidanprize.org

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