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How is learning changing and what does that mean for Cambridge schools?

Sarah Hughes, Head of Research, Education Futures, Cambridge International Education

March 2025

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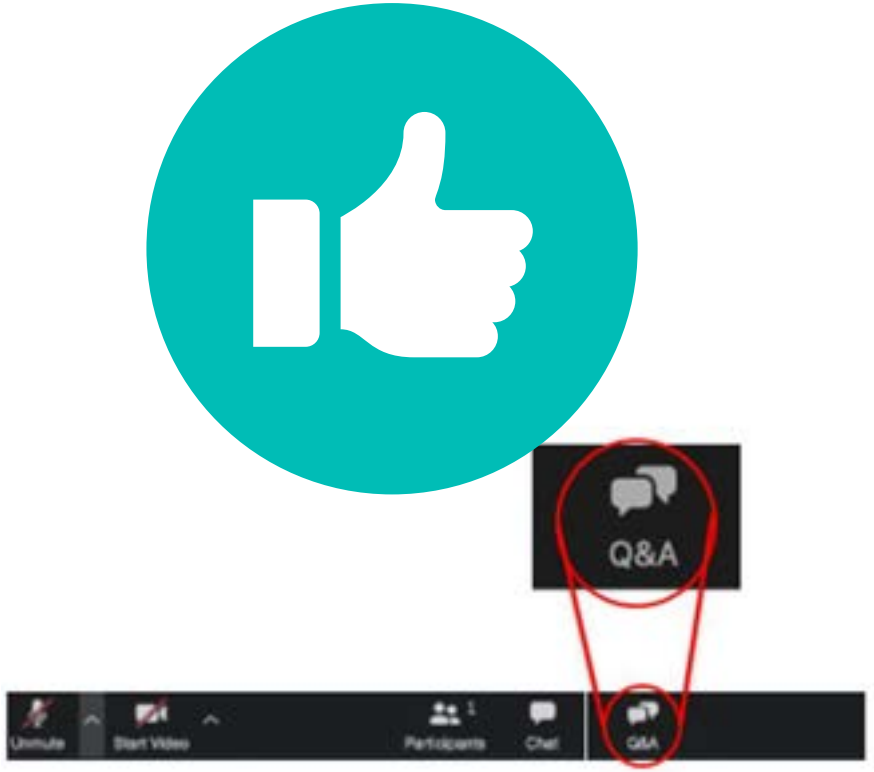
Housekeeping

- Microphones & cameras off.
- Use the Q&A function in the toolbar to send us your questions.
- Like the questions you want answered (we will prioritise those with the most ‘likes’).
- Q&A session will be at the end of the webinar.



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How is learning changing?

Past

Present

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How is learning changing?

Past

Present

Future?

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1980s

Now

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Cambridge research: The futures of learning

DIGITAL EDUCATION FUTURES INITIATIVE CAMBRIDGE

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The aim of this research, looking forward to 2050, was not to predict the future of assessment but to use Futures Thinking as an approach to anticipate plausible future directions.

Dr Fawaz Abu Sitta, Professor Bryan Maddox, Dr Imogen Casebourne, Sarah Hughes, Dr Martina Kuvalja, Judith Hannam, Tim Oates CBE

The Cambridge Futures of Learning Research: listening to learners, teachers, parents and school leaders

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Take part in our global research anticipating the future of learning
The future isn't set in stone... by imagining it and planning for it, we can help create a world we're excited to live in! To understand how parents, educators and learners anticipate the future of learning we are investigating what is disrupting learning and what impact those disruptors are having. Adults can take part here.
Take part

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The aim of our research

To understand from teachers, school leaders, learners and parents:

- What is happening now that is changing learning?
  - What impact are these ‘disruptors’ having?
  - How certain are we that they will impact the future?
- What good things and bad things might happen to learning?

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Emerging findings

What is changing?

The environment

- **Parental support**
- **Climate change**
- **Technology and AI**
- Priority of education
- Learning environment
- Covid

Learners

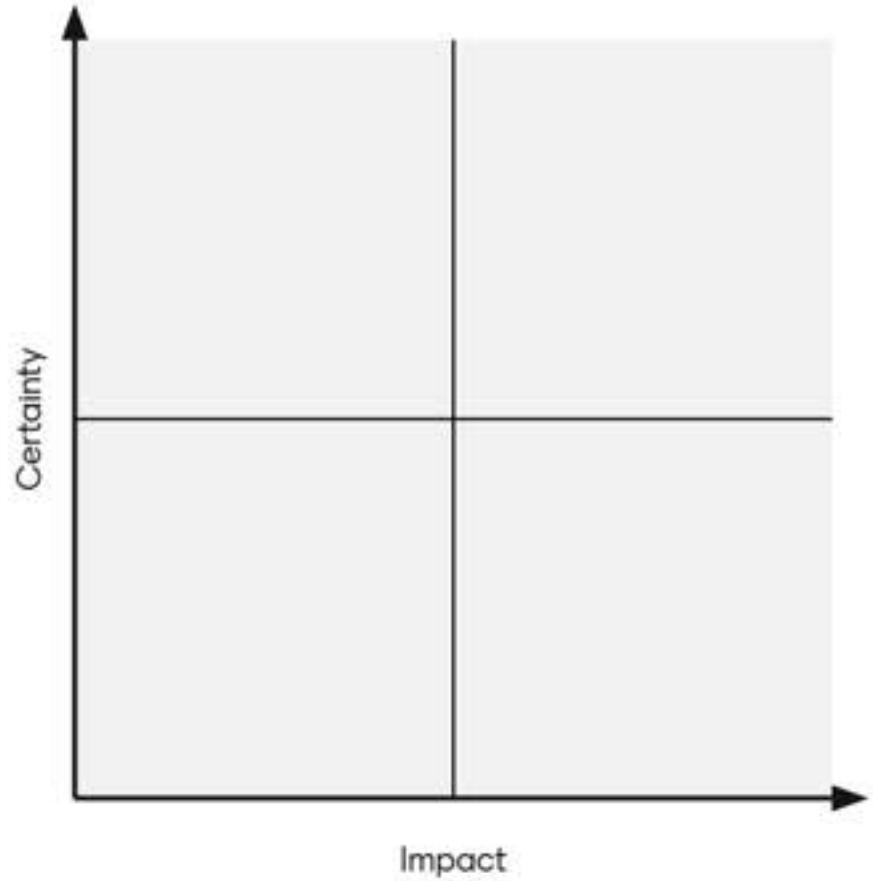
- **Need to focus on learner wellbeing**
- **Active learning**
- **Reduction in creative skills**
- **Need for critical thinking**
- Over stimulation
- Discipline
- Motivation
- Engagement
- Phones and social media

What impact?

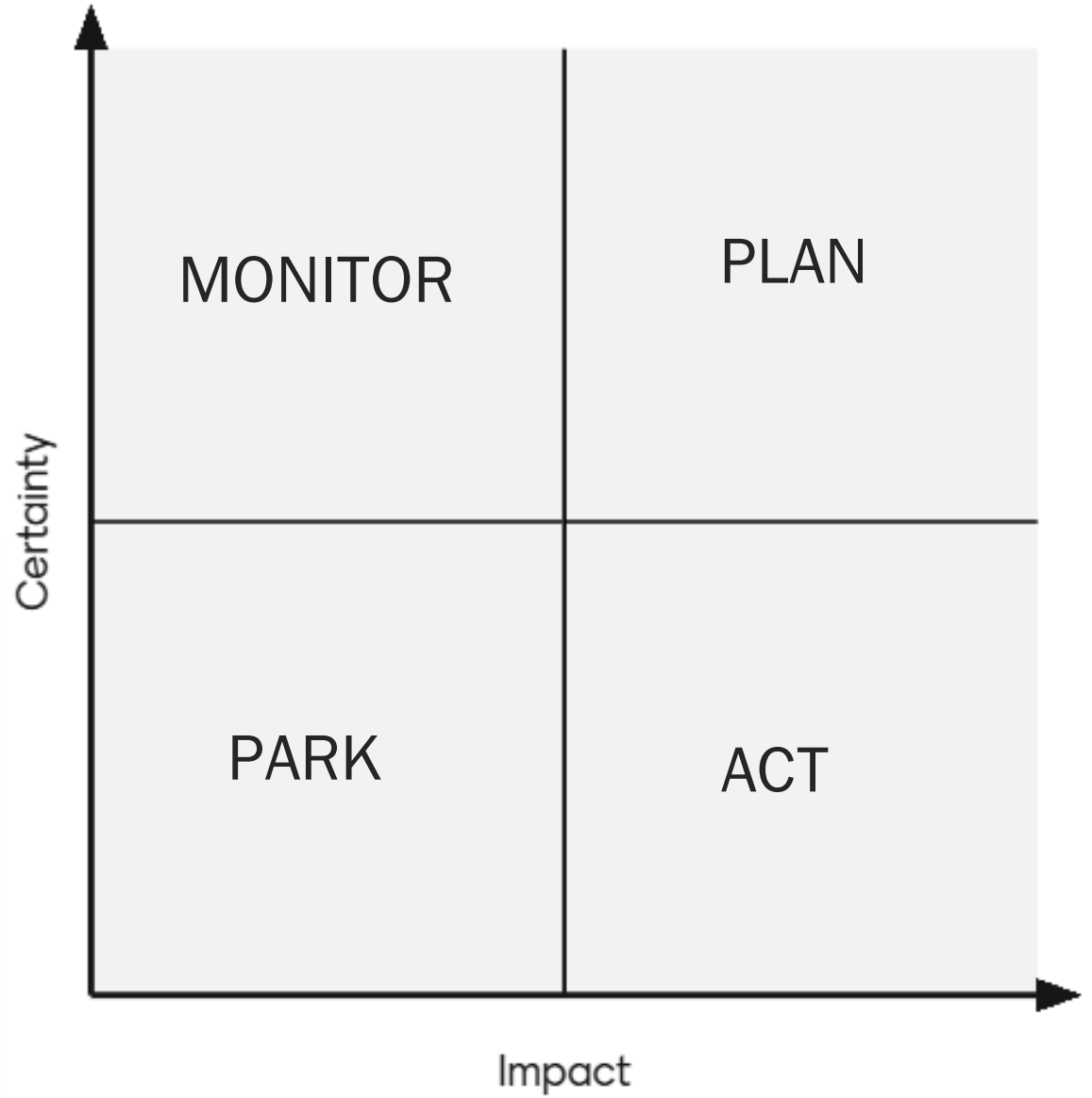
Changes to:

- **Teacher burden**
- **Education gaps**
- **Digital divide**
- **Curriculum changes**
- Performance standards

Rate the impact and certainty of each disruptor



1. Active learning
2. Climate change
3. Creative skills
4. Critical thinking
5. Curriculum changes
6. Digital divide
7. Learner wellbeing
8. Parental support
9. Teacher burden
10. Technology and AI


MONITOR
PLAN
PARK
ACT
Certainty
Impact

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Activities for learners

1. Patterns of change
2. The concept of ‘disruptors’
3. Imagining different futures

Futures thinking is about change
There are different patterns of change

Changes that don't change back

(making orange juice from oranges)

Changes that build up gradually over time

(the spread of mobile phones, where first a few people had them, then quite a lot and eventually almost everyone)

Changes that change back again

(learning at home during Covid and then going back to school).

Sudden changes

(tree falling down in a storm)

Change starts with **Disruptors**

Change starts with something happening – we call this a disruptor

Example

We are learning about the environment and sustainability in class.

What's the disruptor?

Climate change

Example

My school has banned mobile phones.

What's the disruptor?

Social media

3. Future scenarios

What might learning be like in 2050?

How old will you be in 2050?

Imagine the day in the life of a learner in 2050

Imagining the future of learning

What good things could be happening to learning in 2050?

What bad things could be happening to learning in 2050?

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How we will use that research

- To describe the high-level trends driving change in learning
- To describe activities for educators to engage in now and at different time points up to 2050 to be on route to a preferred future (and avoid undesirable futures)?
- To help us design learning curricula, assessments, resources and guidance to support our schools
- Understand what we still need to research!

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Call to action!

If you are interested in participating as a whole class or school please let us know here

Parents, teachersand school leaders can complete this form

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Cambridge Research: Future Skills

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Cambridge Future Skills Research

1. What skills do school learners need to be ready for, and successful in, the world?
2. How can these skills be taught and assessed?
3. To what extent are these skills currently present in Cambridge curricula and qualifications?
4. To what extent can more of these skills be incorporated into Cambridge curricula and qualifications?

Think of a recent task. What skills did you need?

0 responses

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‘Future skills’ identified up to 2021

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IRISH EDUCATIONAL STUDIES
2022, VOL. 41, NO. 1, 171–186
https://doi.org/10.1080/03323315.2021.2022522

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

A scoping review of Future Skills frameworks

Athanasia Kotsiou, Dina Daniela Fajardo-Tovar, Tom Cowhitt, Louis Major and Rupert Wegerif

Digital Education Futures Initiative, Hughes Hall, University of Cambridge, Cambridge, United Kingdom

ABSTRACT

Many agree that education needs new goals that reflect the demands of the future. These are often called ‘Future Skills’, referring to the knowledge, attitudes, values, skills, and competencies intended to prepare learners for the future. The need to teach such Future Skills is often cited, justified by the perception that the future will present new challenges for society.

However, the various frameworks discussing Future Skills, often created and published without consensus, use hundreds of terms to refer to such skills and competencies, presenting a barrier to discussion of education futures. If we are to design a better future for education, then a cohesive analysis must link and synthesise these isolated frameworks published worldwide.

This scoping review utilises thematic analysis and Social Network Analysis to develop meta-categories representing clusters of future skills reported by extant research. Having started with 99 frameworks identified following a systematic search of the literature, which together included 341 different terms, our review identifies nine categories that provide a valuable overview of the field to inform the conceptualisation of Future Skills. Educational practitioners, human resource professionals, policy makers, and educational technology developers can use the meta-categories to prioritise the integration of certain skills into teaching, learning, and retraining. This will help ensure that students and professionals are better prepared to thrive in an uncertain future.

ARTICLE HISTORY
Received 30 November 2021
Accepted 20 December 2021

KEYWORDS
Future skills; twenty-first century skills; competencies; curriculum; assessment

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Future skills identified (2021)

Higher-order thinking skills
- Decision making
- Problem solving
- Critical thinking
- Systems thinking

Dialogue skills
- Collaboration
- Communication
- Empathy
- Listening

Digital literacy
- Computational thinking
- Digital literacy
- ICT literacy
- Digital citizenship
- Online Safety

Values
- Ethical reasoning
- Citizenship
- Sustainability
- Global awareness

Self-management
- Self-awareness
- Resilience
- Emotional intelligence
- Positive attitudes
- Confidence

Lifelong learning
- Learning to learn
- Metacognition
- Willingness to learn
- Active learning

Enterprise skills
- Creativity
- Initiative
- Entrepreneurship
- Curiosity

Leadership
- Responsibility
- Goal-oriented
- Courage
- Management

Flexibility
- Adaptability
- Multi-tasking
- Agility
- Executive function

Which skills do you think are most important for learners?

1st	Dialogue
2nd	Digital literacy
3rd	Enterprise
4th	Flexibility
5th	Higher-order thinking
6th	Leadership
7th	Lifelong learning
8th	Self-management
9th	Values

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Additional skills cited so far (2022-2025)

Digital literacy
- Cyber security literacy
- AI literacy
- Machine learning
- Safety and wellbeing online
- Digital ethics
- Digital marketing

Aesthetics perception

Futures thinking

Storytelling

Financial literacy

Fact checking

Understanding biases

Giving feedback

Coaching and mentoring

Join at menti.com | use code 4218 5430

Mentimeter

Which three *additional* skills are most important?

Aesthetics appreciation	Coaching and mentoring	Digital literacy (more!)	Fact checking	Financial literacy	Futures thinking	Giving feedback	Story telling	Understanding biases
0	0	0	0	0	0	0	0	0

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Questions and themes arising

- Prioritising skills
- Skills within disciplines
- Balancing skills and knowledge
- Teaching and assessing skills

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Final thoughts

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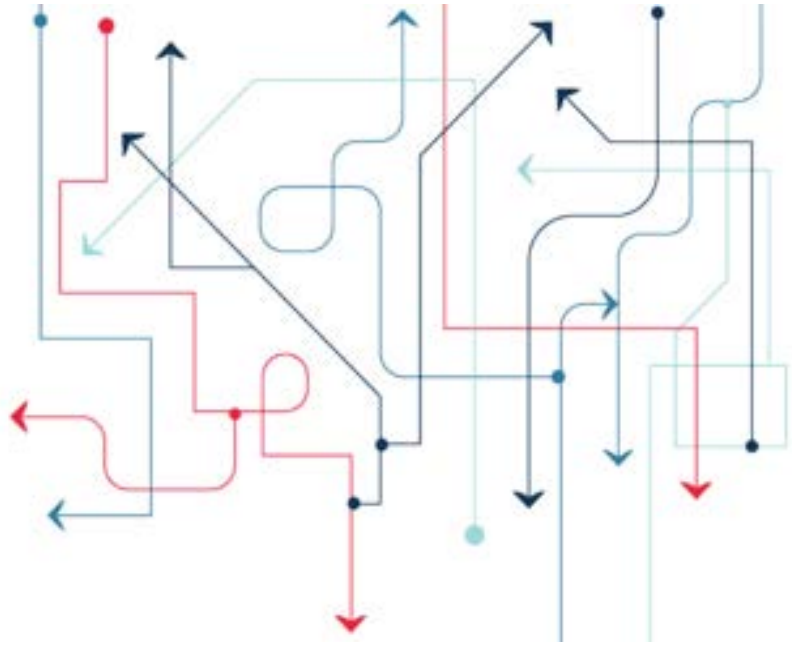
Our research focus

- AI in education
- Immersive and interactive technologies
- Wellbeing
- Future skills

Thinking about the future

- The future is not inevitable or fixed but is the product of human agency
- We may not be able to predict the future, but we can anticipate and understand what is driving us there
- Uncertainty is here to stay! The work of anticipating the future is never done…



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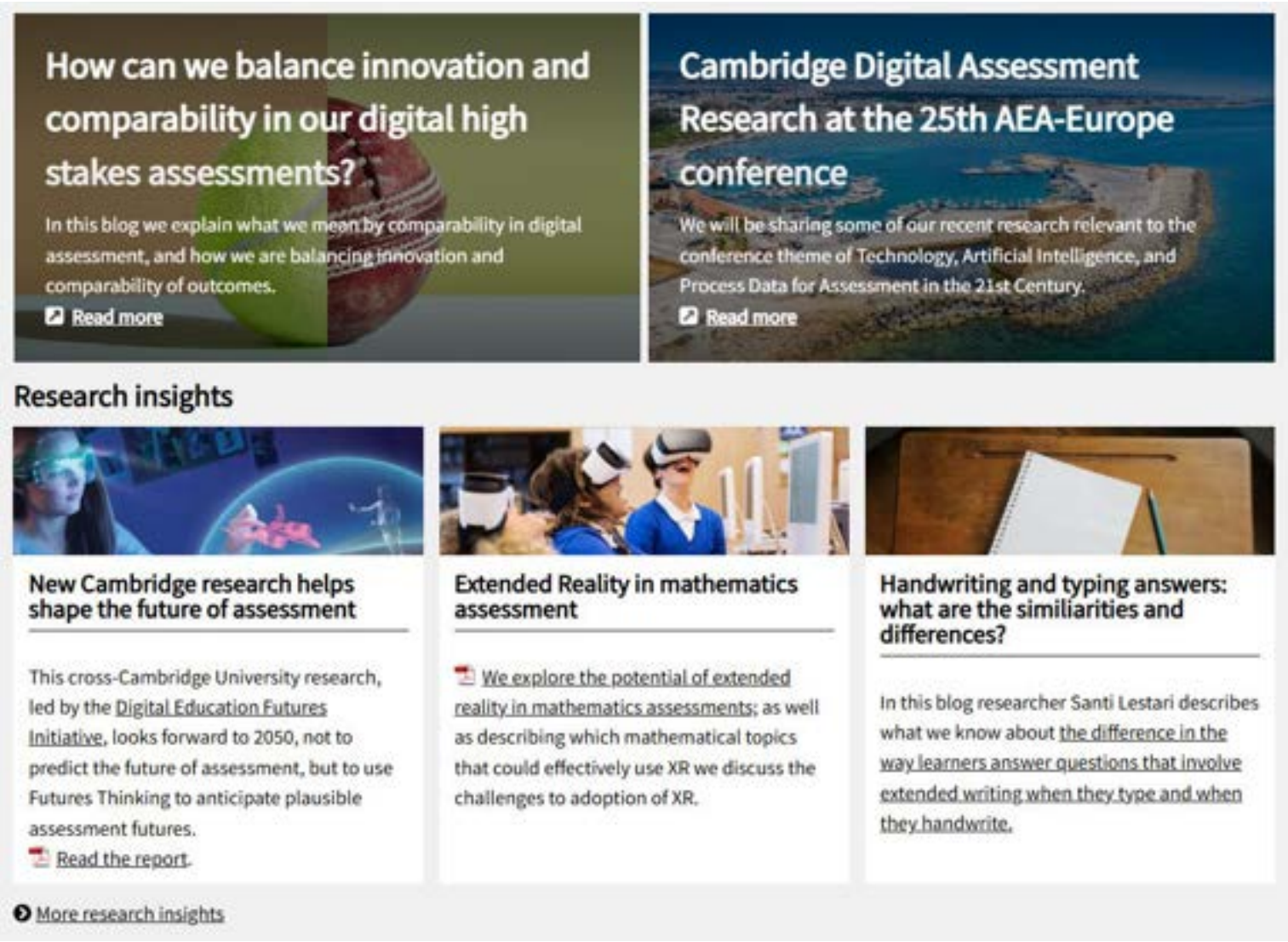
Your questions please

Find out more about our futures research



Where to find out more

How do learners use ChatGPT to write essays?

This blog describes a small scale study which is part of how we are building our understanding of how students use generative AI in their learning and assessment.

The future of high stakes school assessment

In the past 40 years, the pace of technological change has been rapid. In this blog we ask, is digital assessment finally on its way, and if so what does that look like?

Does ChatGPT make the grade?

Cambridge research identifies hallmarks of AI essay writing.

How to teach and assess metacognition

'Ask the experts' is an exclusive podcast for members of Cambridge Assessment Network. This taster edition features Martina Kuvalja, Senior Researcher in the Digital Assessment and Evaluation team, as she answers a question from a member on metacognition, learning and assessment.

Does moving test questions from paper to screen change what is being assessed?

In this report, Vicki Crisp and Jo Ireland draw on existing literature about mode effects to suggest a structure for considering how question design features in computer-based tests may influence the constructs assessed.

What competencies do students need when working with data?

Research by Pia Kreijkes has identified what competencies students need to work with data. We are designing an assessment of Contemporary Geography which aims to develop these competencies.

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Get involved!

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