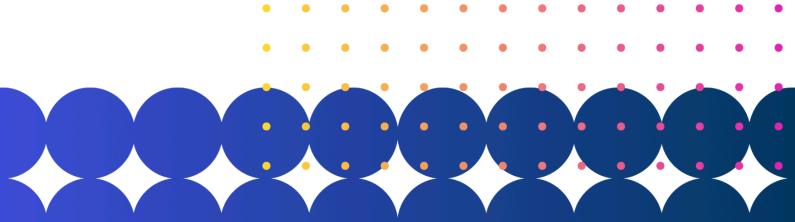


# EdTech Strategy Lab: Empowering the Ecosystem

December 3 and 4, 2024 | Paris, France





## **EdTech Strategy Lab: Empowering the Ecosystem**

Event Report 3 and 4, 2024

## **Executive Summary**

In 2024, the EdTech Strategy Lab launched as a pivotal initiative aimed at empowering the EdTech ecosystem, fostering collaboration, and exploring the evolving needs and requirements of stakeholders around the topics of trust, evidence, and partnerships. This report summarizes the EdTech Strategy Lab: Empowering the Ecosystem event which took place on December 3rd and 4th at the UNESCO headquarters in Paris.

Over 130 EdTech leaders from 34 countries convened across two days to share insights and experiences, contributing to a rich dialogue about the future of trust and evidence in EdTech. This report provides a comprehensive overview of the event, highlighting significant discussions, key themes, and insights that emerged throughout the day-long session. It serves not only as a reflection of the event and its successful knowledge exchange formats, but also a valuable resource for understanding the current landscape of the EdTech ecosystem and the collaborative efforts that have the potential to drive its development.

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## **December 3 | Connecting the Dots**

In collaboration with the <u>UNESCO Digital Transformation Collaborative</u>, the EdTech Strategy Lab team co-hosted a celebratory cocktail reception on the evening of December 3rd to mark the conclusion of two inspiring days at the 2024 meeting of the <u>UNESCO Global Alliance on the Science of Learning for Education</u>.

Generously sponsored by <u>Amazon Web Services</u> (AWS), this networking event brought together **60 participants** from **21 different countries** across Europe-and beyond. Attendees were composed of members of two dynamic communities: participants from the Global Alliance meeting and key stakeholders from the EdTech Strategy Lab community.

The networking event included brief welcome remarks from:

- Borhene Chakroun, Director, Policies and Lifelong Learning Systems at UNESCO
- Beth Havinga, Managing Director of the European EdTech Alliance
- Juan Luis Vilchez, EMEA EdTech Lead at AWS
- Juliette Norrmén-Smith, Associate Project Officer, UNESCO

To add a playful twist, an interactive bingo game tailored for the event encouraged attendees to break the ice and sparked conversations aimed at laying the groundwork for collaboration.

This momentum carried seamlessly into the following day for the kick-off of the *EdTech Strategy Lab: Empowering the Ecosystem*, a special event held at UNESCO to celebrate the achievements of the EdTech Strategy Lab in 2024.



## **December 4 | Event Overview**

On December 4th, 130 leaders from the EdTech sector convened at the UNESCO headquarters in Paris, France, to reflect on the insights gained from a year of extensive research and stakeholder engagement, marking the culmination of the EdTech Strategy Lab's initiatives in 2024.

During the event, the EdTech Strategy Lab team presented key findings and facilitated discussions with experts from various segments within the ecosystem. The focus was on exploring the concepts of trust and evidence, as well as exploring potential solutions that promote evidence-informed decision-making in EdTech.

The day was marked by several significant highlights, including:

- Key insights from a year of ecosystem engagement and research
- Hearing perspectives and motivations from dozens of diverse stakeholders
- Interactive and thematic sessions to clarify challenges and ideate solutions
- Exploring opportunities for deeper collaboration and a vision for 2025–and beyond.

Overall, the event emphasised the importance of connection and engagement among diverse stakeholders, aiming to envision a future where EdTech is stronger and more trustworthy.

The full program is available for download here.



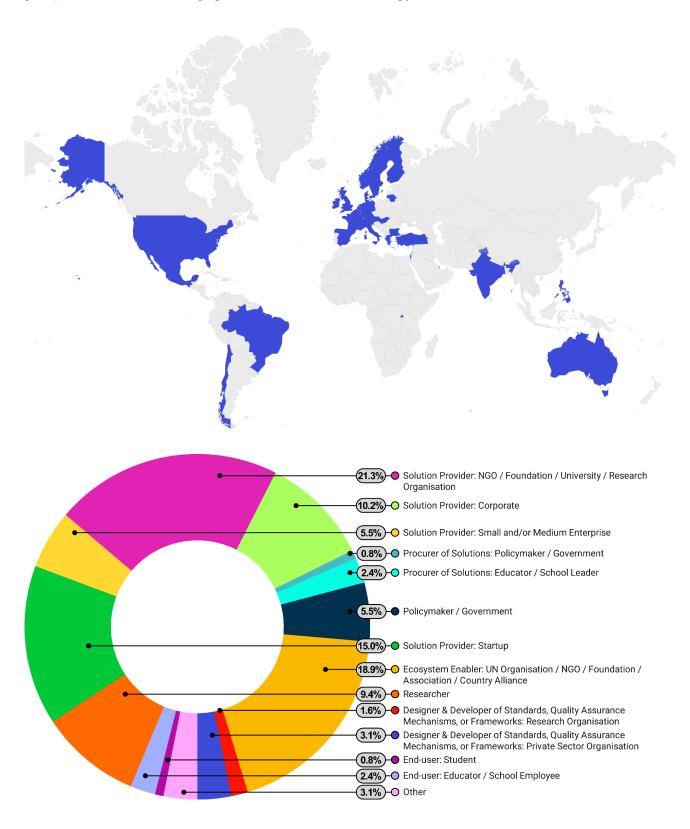






## **Attendees**

A total of **130 participants** from **34 countries** attended the *EdTech Strategy Lab: Empower the Ecosystem* event on December 4th. These attendees represented nearly all the stakeholder groups that have been engaged with the EdTech Strategy Lab to date.



## **Programme Highlights**

### **Welcome Remarks**

Welcoming attendees to UNESCO, Borhene Chakroun, Director for Policies and Lifelong Learning Systems, provided the context for the event from the perspective of UNESCO's Global Education Coalition (GEC). The GEC, formed during the COVID-19 pandemic, encourages the use of effective EdTech to enhance educational outcomes across the globe. Describing the work that the coalition accomplished over the past several years, Chakroun shared the <u>six pillars</u> for digital transformation of education—underscoring that data and evidence lay at its core.

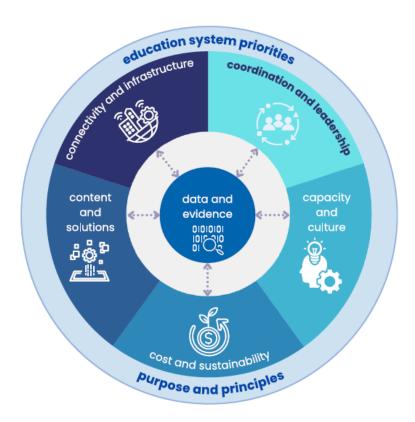


Figure 1. The priorities, purpose, principles and pillars for digital transformation. Source: UNESCO.

Adapted from the <u>Digital Transformation Collaborative</u> (2024).

Reiterating the foundations of the event, Chakroun underscored the importance of multi-stakeholder collaboration to connect the gaps among research, policy, and practice, ensuring that evidence informs the digital transformation in education.



"We need more spaces to work together to bridge the broken links between research, policy, and practice to ensure evidence guides the digital transformation of education."

> Borhene Chakroun Director for Policies and Lifelong Learning Systems, UNESCO

Gwang-Chol Chang, Section Chief for Education Policy at UNESCO, also welcomed participants to the day-long session. In his remarks, he outlined a selection of the ways that the science of learning has already been used to improve policy, but also identified the immense systemic challenges the global education ecosystem currently faces.

While technology can help with these challenges, equity, equality, and sustainability have not been prioritised within digital transformation in education. For example, 25% of primary schools lack electricity; 50% of secondary schools are not connected to the internet; 46% of countries have no national digital skills standards. Studies also find that most EdTech is not backed by learning sciences or evidence of impact.



46%

## of countries have no national digital skills standards in place

UNESCO (2023), Global Education Monitoring Report.

According to Chang, such statistics present three significant challenges for policymakers:

- Digital technology has increased access to education, but its effectiveness in improving learning outcomes is inconsistent. Current findings show mixed results across different contexts and regions.
- 2. The science of learning offers valuable insights to optimize technology use in education, guiding the design, implementation, and assessment of educational technology through evidence-based frameworks and efficacy research that can guide policymakers to effectively integrate technology into education.
- 3. Key challenges to bridging science and EdTech development include mismatched timelines and objectives, oversimplification and generalisation.

The welcome addresses by UNESCO's Chakroun and Chang emphasised the importance of collaboration among various stakeholders to tackle the pressing challenges posed by the digital transformation of education. Their introduction set the tone for the event, inviting all attendees to engage in meaningful dialogue about the future of education through sharing their insights, experiences, and working together to find new pathways forward.

## The EdTech Strategy Lab: 2024 in Review

With the support of the <u>Jacobs Foundation</u>, the EdTech Strategy Lab launched in March 2024 with the primary aims of the project defined as:

- Determining best-practice formats for knowledge exchange and sharing on the topics of evaluation, evidence, and trust.
- Connecting evaluation and evidence-based decision making to key processes.
- Developing connections between evaluators and key stakeholders to increase understanding.
- Assessing whether a common or unified criteria framework of evaluation across multiple markets is possible.

Beth Havinga, Managing Director of the European EdTech Alliance, explained that trust within the context of EdTech often extends beyond questions of reliability or even subjective quality; it comes down to the feeling of being able to trust-either someone or something. In that way, technology can only develop at the speed of trust, which can explain why some of our education ecosystems are so varied in their adoption and use of technologies.



## "AI (EdTech) can only develop at the speed of trust."

Daniela Hau Head of Innovation, SCRIPT

The confidence that decision-makers—such as educators, administrators, and policymakers—place in EdTech tools is crucial for their adoption and effective use. This trust hinges on several factors, including the perceived efficacy of the technology, its security, and its alignment with educational objectives.

Throughout the duration of the Strategy Lab project it has become evident that the idea of trust was linked with needing to prove trustworthiness. This led to trying to understand which 'evidence' could actually be used as a basis to build trust, raising critical questions about what constitutes evidence and how it can be used to support EdTech development, implementation and, most importantly, learning outcomes.

One conclusion is that evidence can not only be hard to define, but also hard to trust. This is for a number of, often interconnected and complex, reasons:

- Gold standards of research may be inappropriate
- Outcomes need to be clear and comparable
- Value of evidence needs to be proven
- Criteria for trust may differ
- Clear and transparent communication is needed
- The scale and context of the research conducted matters

- Cost-effectiveness can play a big role
- Complexity of the existing framework landscape

Many existing evaluation frameworks are outcome-based, including having a focus on student, teacher, or even school outcomes.



#### Student Outcomes

- Build student knowledge
- Improve attainment
- Improve behaviour or wellbeing
- Increase student collaboration
- Reduce attainment gap



#### **Teacher Outcomes**

- Improve teacher knowledge / wellbeing
- Improve quality of assessment
- Improve teaching efficiency / productivity
- Reduce teacher workload



#### School Outcomes

- Improve parental engagement
- Improve school processes
- Provide school data
- Save the school money and time

Figure 2. Diverse outcome goals in education based on an impact model developed by EdTech Impact and researchers at University of College London. Source: Adapted with permission from EdTech Impact and Alison Clark-Wilson and Kristen Weatherby at the University of College London.

While some technologies directly lend themselves to learning outcomes or impact; others should not be evaluated within this category. The sheer diversity of evidence practices means that there is little consensus or understanding between different approaches and/or frameworks. Furthermore, a lack of communication and collaboration between different stakeholders about their respective understanding and needs only leads to a further disconnect with regard to trust.

## **Knowledge Exchange Formats**

Throughout the EdTech Strategy Lab project, a primary objective of the deployed knowledge exchange formats has been to build new connections and facilitate collaboration among diverse stakeholders within the EdTech ecosystem. These formats aim to foster dialogue, share experiences, and generate actionable insights that can drive progress in the field. Beyond being an integral part of the research component of the EdTech Strategy Lab, these formats also served as connecting threads woven during the entire *Empowering the Ecosystem* event.

16 In-Person & Digital Workshops 10k+
Community Reach

48
Ministries of Education
Engaged

Presenting the successes of the variety of exchange formats deployed as part of the EdTech Strategy Lab, Michelle DuQuette, Community Strategist for the European EdTech Alliance, shared that the project has received significant interest, support, and participation from across the entire ecosystem. In total, the team conducted 16 in-person and digital workshops, as well as nearly 20 listening sessions with individuals and organizations across stakeholder groups. There has also been continued event engagement and thematic surveys, which have further involved the community as a whole.

In total, the EdTech Strategy Lab's efforts have reached over 10,000 community members, bringing hundreds of individuals and organizations into active dialogue. Through these engagement initiatives, the aim was to connect with a diverse range of stakeholders—from elementary school students to senior policymakers. This approach has included high-profile events such as those held with the <u>Digital Education Dialogues event</u> (as part of the Belgian Presidency of the Council of the European Union in May 2024) and, more recently, the <u>Council of Europe's working conference</u> in October 2024 on the regulation of AI in education, which brought together representatives from 48 Ministries of Education.

The development of various knowledge exchange formats as part of the EdTech Strategy Lab has been a deliberate, iterative process involving design, experimentation, reflection, and refinement. These formats have facilitated meaningful connections, from networking breakfasts to interactive activities like the bingo game at the previous night's event. They have also fostered constructive dialogue through online workshops featuring targeted stakeholder discussions, providing spaces for both the convergence and divergence of ideas. In some cases, the team has also conducted localised workshops in local languages in Austria and Switzerland to better understand local dynamics of different stakeholder groups.

The *Empowering the Ecosystem* event built on these existing formats, engaging even more participants from across the EdTech ecosystem to dive more deeply into questions of trust, evidence, and partnerships.

## **Research and Insights**

As members of the EdTech Strategy Lab research team shared at the event, information was collected this year through the knowledge exchange formats, as well as through a comprehensive literature review process. Exploring the topics of trust, evidence, and evaluation mechanisms in EdTech as a whole underscored the fact that the EdTech ecosystem involves a web of diverse motivations, skills, needs, and goals held among the various stakeholders, with constant flows of connection and interdependencies between them.

While trust, as a fundamental concept and basis of all relationships, was the starting point for data collection and research, it soon became apparent that this was strongly influenced by

cultural and contextual factors. As the foundation of adoption and implementation of EdTech solutions, trust is particularly important when there are numerous unknowns and uncertainties. For example, in the EdTech ecosystem where the dynamic world of technology meets the more conservative education sector. Recognising this, the EdTech Strategy Lab team looked for a deeper understanding of the intricate dynamics shaping this ecosystem.

This extremely complex ecosystem—or perhaps ecosystems—is further complicated by the various socio-cultural and geopolitical contexts because education systems are typically conceptualised nationally and/or regionally, rather than on a global scale. The ecosystem is dynamic and complex and stakeholders' motivations, skills, agendas, needs and goals meet, intersect, and flow, throughout all interactions between stakeholders.

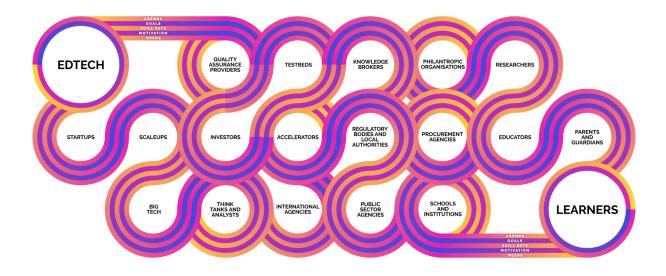


Figure 3. Depiction of the complex interactions and dependencies between stakeholders in the EdTech ecosystem.

Source: <u>European EdTech Alliance</u>, 2024.

To date, the research conducted as part of the Strategy Lab has also shown that there are significant challenges around what constitutes "evidence" or what is accepted as evidence by various stakeholders and how evidence is created and provided. Even within a single stakeholder group, such as researchers, there is a lack of consensus around what type of evidence is 'true' or valid. This also varies across different regions and stakeholder groups.

Considering the diversity of needs, motivations, and varying definitions of evidence, an "integrated system of multiple frameworks" might be a better approach to address the needs and motivations of all stakeholders involved than a single standardized framework. Moving forward, the EdTech Strategy lab research focus will move from the concepts of 'trust' and 'evidence' to more practical definition of needs and requirements of the individual stakeholders, the outputs that may be most helpful to them, and the best methods of communicating these.

## **Part 1: Landscape Analysis**

In recounting the journey of the EdTech Strategy Lab this year, Beth Havinga reported that the team began by exploring existing evidence and evaluation mechanisms globally. Researching this landscape revealed that there are over 140 different frameworks of evaluation for EdTech. Each of these frameworks addresses different criteria, each comes from diverse and complex backgrounds, and all of them try to address needs from the perspective of these backgrounds and motivations.

Adding to this complexity is the fact that each evaluation framework uses entirely different and, at times, incomparable methods. These can range from assessing four to as many as 130 criteria addressing the same scope of evaluation. This makes it nearly impossible to draw meaningful comparisons between these frameworks and their results. In turn, this also means that EdTech companies going through these evaluations face the challenge of the outcomes not being recognised by other evaluating bodies or in other contexts. This led many respondents in our workshops to question the practical need for evaluations:



"It is unclear why we should do research. EdTech decision makers care very little about evidence."

EdTech Strategy Lab participant, Sett

Throughout our workshops, continued Havinga, the team received feedback on the biggest hurdles to working with evaluation or evidence frameworks, which included:

- Time required to complete any evaluation (with most ranging from 6-9 months)
- Acceptability and recognition of certifications in other regions or by other stakeholders
- Interoperability of evaluations/needing to do the same things in multiple systems
- Relatively low uptake and a lack of incentives to go through evaluation processes
- Lack of support resources or guidance mechanisms for users of the frameworks
- Not aligned with needs of the key stakeholders in the ecosystem

Havinga stated, "We began this year trying to understand the feasibility of a unified or common framework." However, throughout the year it became clearer that the deeper layers of complexity involved with each type of evaluation practice - all being driven by starkly different needs and agendas, lead to differing evidence outcomes. Furthermore, these outcomes are not always tailored to the needs of the stakeholders they are intended to address.

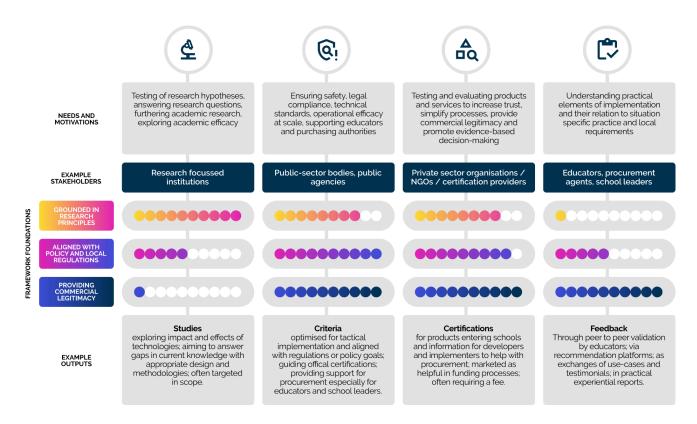


Figure 4. Generalised types of existing evaluation frameworks identifying needs, motivations and outputs as identified by the EdTech Strategy Lab project. Source: European EdTech Alliance, 2024.

## **Convergence and Divergence**



Michael Forshaw Chief Executive Officer EdTech Impact



Zelda Gerard-Besset Legal Officer, Compliance Tools Department National Commission on Informatics and Liberty

This session connected two unlikely discussion partners to share their diverse perspectives on the topic of evidence through a series of increasingly specific questions. This session brought together two speakers: Michael Forshaw, the CEO of EdTech Impact in the UK, and Zelda Gerard-Besset, Legal Officer with the Compliance Tools Department at National Commission on Informatics and Liberty (CNIL) in France.

Audience members added another layer of interaction by contributing their thoughts to the first two questions through Mentimeter. This helped to further gauge areas of consensus and divergence in real-time, strengthening a sense of community and shared discovery.

#### **Question 1: Autonomy or dependence?**

#### **Autonomy**

Michael Forshaw stated that, in the UK there is a high degree of autonomy over what teachers can choose to purchase and implement in their classrooms and that this should be encouraged, mentioning that teachers trust other teachers and it is important to foster that trust.

#### Dependence

Zelda Gerard-Besset found that, while it is good to use word of mouth recommendations, which do provide a degree of autonomy, it is also important to rely on evaluation mechanisms and regulatory bodies who are providing well-founded and thought through quidance.

There was a clear preference shown in the audience as they answered this polarising question:

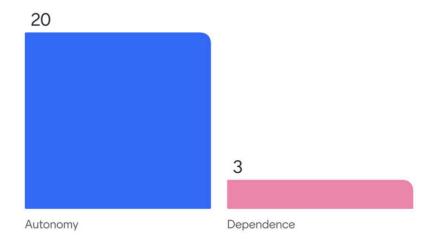


Figure 5. Audience responses via Mentimeter to the question, autonomy or dependence?

## Question 2: What do you believe are necessary pieces of information or 'evidence' that Edtech products should be able to provide?

In identifying key pieces of information or evidence that should be provided, Forshaw drew on his experience developing the platform EdTech Impact, stating that teachers are looking for contextual evidence when they are weighing up products and services for their schools. This can include information like the size of schools who have used these products, demographics, SEN inclusion, socio-economic backgrounds, etc.

Essentially, Forshaw claims that educators want to see how products have worked in schools and learning environments like the ones they find themselves in. However, EdTech providers are often not able to provide this information in a meaningful way. Forshaw continued by suggesting that negative results, or showing what is not working, are also valuable for informing choices and building trust.

Additionally, student engagement is very important as a piece of evidence that students and teachers look at. Forshaw gave the example of trying to understand whether the tool made students feel safe or threatened (even by other users within the system) or happy. At times, some of these reactions may be entirely surprising, but it is information that is extremely important for parents and educators. This situation feeds into a shift that Forshaw is noticing regarding the popularity of referring to 'PedTech', which entails a strong focus on pedagogy before technology and an inherent inclusion of pedagogical beliefs in development. Forshaw adds that before selecting a particular digital tool, many educators also try to assess whether or not a tool aligns with their personal pedagogical beliefs.

Coming from a strong regulatory background, Gerard-Besset emphasised that it is important to have the rights of the child in mind when evaluating products and services. This involves asking whether the use of a tool is truly in the child's best interest. To ensure this, it is essential to have evidence and information about age appropriateness, safety, impacts on well-being, and adherence to privacy requirements, suggesting that these aspects - along with respecting children's rights - should be embedded by design. Additionally, adherence to standards provides a strong foundation for evidence, whether through specific EdTech standards or broader ones like those from International Organization for Standardization (ISO). There also is a need to understand and address local contexts when sharing evidence.

The answers from the audience participants showed a breadth of evidence above and beyond what the two speakers identified as important elements of evidence that EdTech should provide.



Figure 6. Responses via Mentimeter to what kinds of evidence and information EdTech companies should provide.

Question 3: How does your organisation evaluate and assess EdTech products? As evaluators, what do you see is being used the most in terms of evidence and how are people using that information to make their decisions?

In her work at CNIL, Gerard-Besset is not responsible for the enforcement of regulations, but assists with providing legal advice, best practice examples, and the creation of practical guidance and support mechanisms. One of these is the regulatory sandboxes that enable EdTech companies to assess and prove compliance with the GDPR. Additionally, CNIL creates other types of information and proof, for example, through encouraging the development of codes of conduct or privacy impact assessments, which can then be shown to procurers. CNIL's collaboration with international organisations like UNICEF on children's data provides valuable insights into using international law and standards as a foundation for procurement decisions. Gerard-Besset proposes that it could be worthwhile to explore the use of marketplaces to identify companies who are capable of complying with these standards, thereby helping decision makers.

In describing EdTech Impact, Forshaw explained that they provide agile, school-led evaluations to help create understanding about how products are being used in different contexts. The platform aids schools in the collection of their own insights and data and in methods to evaluate the pedagogical quality and impact of the tools that they are using. The impact metrics for the platform were developed in partnership with University College London.

Noting the importance of community, Forshaw emphasised that teachers want to help each other and share how they are using the products they choose. With teachers not initially as motivated to contribute, the company focuses on EdTech organisations and provides incentives for companies to update their impact metrics and ensure that results are current and useful. This is especially important for schools who are comparing results as they discover new products. By acquiring the Education Alliance Finland, EdTech Impact has been able to more holistically explore pedagogical evaluation practices. Moving forward, Forshaw sees a future for also offering predictions based on existing data.

## Fireside Chat: Building Bridges between Industry and Research



**Graça Carvalho Executive Director** Centre for Digital Innovation University College London



**Chris Matthews** Global Education Strategy and Business Development Principal Amazon Web Services (AWS)

This discussion highlighted the importance of creating a collaborative ecosystem to bridge the gap between research organizations and EdTech companies, with a focus on transforming research prototypes into market-ready products.

Graça Carvalho from <u>UCL's Centre for Digital Innovation</u> (CDI) was joined by Chris Matthews from <u>Amazon Web Services</u> (AWS) and emphasised the need for a meeting place where researchers and entrepreneurs can connect, exchange ideas, and develop solutions. Under the motto "together we grow," CDI is a collaborative initiative between University College London (UCL) and AWS that is a destination for "real-world research translation" and embodies this vision by creating partnerships, refining methodologies, and providing a space for innovation.

Over the past three years, the CDI has evolved its approach to collaboration. In the first year, it launched an accelerator program to support the development of EdTech innovations. In the second year, it introduced a <a href="PhD scholarship">PhD scholarship</a> program to engage students in the innovation process. In 2024, during the Centre's third year, it focused on identifying and addressing responsible digital innovation <a href="challenges">challenges</a> in the fields of EdTech and HealthTech. The next phase involves creating a replicable methodology to ensure sustained growth and innovation within the EdTech ecosystem.

A key element of CDI's work is its <u>Impact Accelerator</u> program, which has supported growing EdTech organizations by helping them integrate evidence-based practices into their offerings through technical support powered by AWS. The program now invites alumni to reconnect and contribute to new initiatives. CDI's accelerator remains open to participants who meet specific criteria, such as a strong research foundation, a clear understanding of audience needs, and the necessary technical expertise. The next accelerator cohorts will be accompanied by events aimed at generating dialogue among stakeholders and addressing technical barriers in EdTech. Plans are also underway to launch an ecosystem-led UK-based testbed in 2025, providing a controlled environment to trial and refine innovations.

The fireside chat between Carvalho and Matthews underscored how partnerships like theirs can drive digital innovation at scale. AWS, as a collaborator and funder, for example, has pushed the CDI to adopt a more customer-focused approach, ensuring that innovations are both impactful and market-ready. This partnership also involves AWS's participation in the development of the 2025 testbeds, further cementing their role in scaling EdTech solutions.

### **Part 2: Stakeholder Considerations**

The goal of this part of the day was to illuminate a diversity of perspectives among the attendees. Inviting experts from different segments of the EdTech community to share their needs and motivations, the foundations of their frameworks, and the outputs.

As part of this segment, several 'off the record' quotes were shared by the Strategy Lab team to provoke critical thought and encourage participants to dig deeper into the themes and sentiments expressed during the dialogues that had been captured as part of the listening sessions the EdTech Strategy Lab team conducted over the last nine months. The quotes reflected a diversity of opinions from representatives of research institutions, private sector organisations, EdTech companies, and practitioners.

## **Off the Record Quotes**



## The highest level of ESSA is unattainable for 90% of EdTech companies.

Private-sector organisation representative who was involved in the creation of the ESSA standards

## Technical conformity testing is not evidence!

A research institution representative talking about public-sector frameworks

The certification is just an expensive marketing gimmick, neither comprehensive nor rigorous.

> European EdTech company, having received certification through a private sector-led evaluation framework

We have to find solutions that we can actually tailor to our own needs and this costs money, of course, and human resources.

> A head teacher describing their decision-making needs

This session showcased the richness of previous dialogues, while also actively engaging with considerations from across the spectrum of EdTech experiences. This included hearing directly from representatives from the research community, the public and private sector, as well as practitioners.

#### Research



## Dr. Tim Brüggemann

Prorector
Online University, Distance Learning and Advanced
Education
University of Applied Sciences FHM

Tim Brüggemann highlighted the challenges faced by educational scientists regarding the proliferation of measures in emerging fields. He noted that there is often a tendency towards a 'jungle of measures' in new areas of action, where tools and measures proliferate in pedagogical contexts while quality often becomes secondary. The rise of educational technology presents a similar danger, as many EdTech tools are developed and utilized without critical reflection or a solid scientific foundation. This phenomenon adversely affects users, decision-makers, and developers alike.

To address these concerns, Prof. Dr. Claudia Wiepcke from <u>Karlsruhe University of Education</u> and Brüggemann from <u>Fachhochschule des Mittelstands</u> have initiated the development of <u>the EdTech Index</u>. This index is designed to serve as a reflective tool, emphasizing quality dimensions that are essential in the development and application of educational technology.

The EdTech Index allows teachers, users, and development groups to engage in self-reflection regarding their EdTech tools. Furthermore, the index format provides an opportunity to illustrate the current state and developments over time.

Looking ahead, they plan to create a standalone tool based on the EdTech Index, which will not only facilitate self-reflection but also enable objective external assessments and certifications if necessary. Additionally, they are working on a book project titled 'The Age of EdTech' with Springer, set to be published in 2025. This book will explore the dimensions of the EdTech Index in collaboration with academics and practitioners. However, they are currently seeking a sponsor for this initiative.

## **Policy**

Lukas Peh
Project Lead
eduCheck Digital
FWU Institut für Film und Bild gGmbH



Lukas Peh, Project Lead of <u>eduCheck Digital</u>, began his perspective statement with a short scenario. In the scenario, he described a teacher searching for digital educational media that she wants to use in her class. Once the teacher has selected her material, she is obliged to ask the headmaster for permission to use said media.

In Germany, headmasters oversee the use of digital educational media in schools but often lack guidance on its trustworthiness, particularly regarding IT security, privacy, accessibility, and so on. Consequently, they frequently withhold permission for teachers to use such tools.

This is where eduCheck Digital wants to step in as a project commissioned by all 16 federal states. The goals of the project are to create standardised audit criteria and the corresponding processes for evaluating digital educational media. Ultimately, eduCheck Digital aims to introduce a common seal of approval across all 16 federal states in Germany. The audits will focus on legal compliance, data protection, IT security, interoperability, technology, accessibility, and usability.

Since May 2024, they have also focused on the use of AI in digital educational media. During the project phase, eduCheck Digital's main objectives are to evaluate, test, and implement systems and processes. However, seals will not be awarded until the project phase is complete and operations are fully established.

Their goal is to compile and evaluate the results to provide the federal states with recommendations, including next steps and organisational strategies. This will also cover a cost estimate and relevant contract templates for productive operations.

Project deliverables include audit processes, the awarding of seals for digital educational media, a searchable database of audited media, audit criteria and test catalogs, assessment schemes, and a technical platform. The eduCheck Digital platform will serve as an audit management system, supporting data maintenance and process execution.

The project was approved in autumn 2021, launched in spring 2022, and initially planned to conclude in spring 2025. However, it has been extended to June 2026 to include the additional focus on evaluating AI. A key aspect is analyzing the dense stakeholder network, which involves many interdependencies between various groups.

However, the picture remains incomplete because they are missing the perspective outside of Germany and there are many more stakeholders to be found outside of the German ecosystem. There are also a few other challenges within the project that the team is still having to grapple with, according to Peh. These include:

- Overcoming the challenge of defining what constitutes digital educational media, for which the team has landed on an internal definition that they are using as a working hypothesis. The definition is publicly available <u>online</u> (in German)
- Identifying and involving all relevant stakeholders. This takes a lot of networking analysis and active engagement, as well as achieving transparency through clear and comprehensive communication.

 Understanding the questions that stakeholders have and how eduCheck Digital can provide orientation. However, as Peh pointed out, this orientation is only possible if trust exists within the whole process.

It is therefore important to define the project's scope, talking to all stakeholders involved and trying to be as clear and comprehensive as possible in their communication.

Peh concluded his perspective statement with another scenario. In this scenario, there is another teacher searching for digital education media. She finds the digital education media that has the seal of eduCheck Digital. The seal is known and provides trust. She asks permission from the headmaster to deploy the solution; this time, he knows that he can trust the seal and is happy to give permission to use it. This is the goal that eduCheck digital ultimately wants to achieve.



## **Felicity Clissold**

Business Analyst National Schools Interoperability Programme **Education Services Australia** 

Felicity Clissold, a Business Analyst at the National Schools Interoperability Program at Education Services Australia (ESA), presented an overview of the Safer Technologies for Schools (ST<sub>4</sub>S) program.

Education Services Australia is a ministerial not-for-profit company owned by the Australian states, territories, and Australian government education ministers. Their mission is to advance key nationally agreed upon initiatives, programs, and projects for education in Australia.

Safer Technologies for Schools is a standard assessment framework for EdTech and software in K-12 education. Developed in collaboration with various educational sectors and the New Zealand Ministry of Education, ST4S provides a national and standardised approach for assessing edtech and software services.

Their goal is to minimise risks associated with selecting and procuring digital products and services for schools. The ST4S initiative was established to align requirements on a national level, reduce duplication in assessment activities, and assist schools in safely procuring and utilizing EdTech. Additionally, it benefits technology providers by enabling them to demonstrate compliance with regulatory standards and best practices.

The ST4S framework covers key themes such as security, privacy, and safety. It includes modules on security, access, testing, privacy, terms of service, functionality, safety criteria, human resources, and governance.

The assessment process is in stages over a 12-week period and begins with a readiness check, which is a self-assessment tool for compliance testing. Next, working party members nominate a selection of software services to undergo full assessment, which includes a questionnaire, manual inspection, and documentation review.

If successful, suppliers are required to be recessed in a two-year cycle. During these stages participants may withdraw, fail to meet standards, or their application can be discontinued. The outcomes are categorised as low, medium or high risk, or deemed to be used responsibly, or used with caution. These outcomes help schools make informed decisions about the technologies they use. ESA then shares the reports with the Working Group for Distribution to Jurisdictions. However, it is worth noting that each jurisdiction may have further local requirements.

The ST4S product badge program helps schools and educators easily identify suppliers that have met minimum standards required to participate in the program. To be eligible, suppliers must complete the latest version of the ST4S framework, achieve a low risk, medium risk, focus on responsible outcomes and adhere to badge guidelines.

When evaluating EdTech, policymakers and suppliers should prioritize privacy, security, and safety. Key questions to consider include: What data is collected? Where is it processed? And how effectively are safety-by-design practices implemented?

ST4S aims to be future-facing and, as of 2024, is in the initial phases of addressing the exacerbated and novel risks posed by AI-enabled technologies in schools. A new AI module has been developed and tested, aligning it with the safety, privacy, and security principles outlined in the <u>Australian Framework for Generative AI and Education</u>.

Additional controls for the remaining responsible AI principles are currently being proposed. Since its initial iteration in 2018, we have recognized the importance of establishing robust standards for evidence checks, building a collaborative team of assessors, and the necessity of regularly updating assessment tools to address emerging risks. Supporting small to medium-sized businesses through the assessment process is also crucial.

#### **Private Sector**

Jared Lee
Chief Program Officer
Al-for-Education.org



The mission of <u>Al-for-Education.org</u> is to help support the ecosystem as a whole to realise the enormous promise and potential of AI to help tackle the global learning crisis. In other words, to help equitably improve learning at scale through AI-powered EdTech in low- and middle-income countries. To date, their work has been generously supported by the <u>Bill &</u>

<u>Melinda Gates Foundation</u>, the <u>Jacobs Foundation</u>, and the <u>UK Foreign, Commonwealth and Development Office</u>.

They have created an evidence and quality assurance framework, which is designed with two main user groups in mind: product and solution developers, as well as more sophisticated decision-makers like policymakers and funders. It covers the full product lifecycle, from ideation to scaling, and addresses key components such as safety, ethics, impact, and cost-effectiveness.

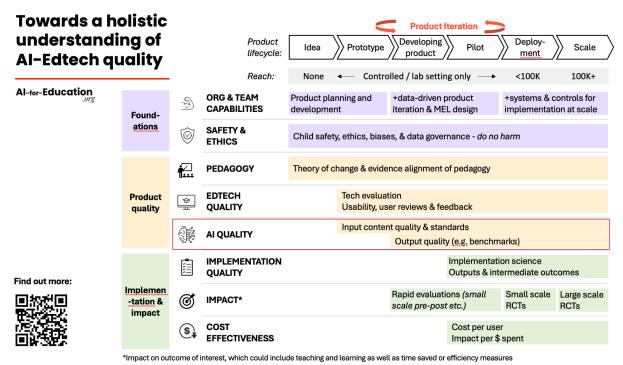


Figure 7. Overview of Al-for-Education.org's quality assurance framework. Courtesy of Al-for-Education.org.

The motivation behind this framework stems from three key beliefs about the sector:

- 1. The opportunity for transformative impact with generative AI is different from previous EdTech hype cycles. If it is possible to realise the opportunity and manage the risks, the organisation believes that AI has the potential to be incredibly transformative. However, to avoid the pitfalls of the past, it is necessary to understand if it is working, and, if so, how much, for whom, and under what conditions.
- 2. There is a need to shift towards a more evidence-driven ecosystem for AI EdTech, as the rapid proliferation of products is not accompanied by sufficient evidence of their effectiveness. AI-for-Education.org's recent <u>product mapping</u> found over 80 products being implemented in sub-Saharan Africa, India and Pakistan, but only a handful that had any evidence to support their quality or impact. User reviews alone are not enough, and it is not possible to move faster than the 'speed of trust'.
- 3. A holistic and dynamic understanding of evidence is required, going beyond just randomised controlled trials (RCTs), to capture the unique aspects of AI-powered EdTech.



"What we need in the ecosystem is a dynamic and holistic understanding of what we actually mean by evidence."

> Jared Lee Chief Program Officer, Al-for-Education.org

To achieve a more holistic understanding, Lee explained that it is necessary to move beyond RCTs because of their limitations. Impact evaluations like RCTs can provide an important snapshot, and more are needed. But RCTs are also expensive, hard to design well, context-specific, and not appropriate for every stage in an organisation's evidence journey.

Accordingly, it is also important for stakeholders involved in designing and developing education solutions to take full advantage of the data inherently available from other EdTech, in order to perform earlier, faster, and more regular impact assessments, both in the early stages of the product lifecycle, and as they scale.

Overall, the quality assurance framework developed by AI-for-Education.org aims to capture what matters to different stakeholders, and how this varies at different stages of the product development lifecycle.

#### **Practitioners**



Lola Garay Abad
Director of Educational Impact
eduki

<u>Eduki</u> is a digital platform for K-12 teachers to share/see materials they have created with other teachers across multiple subjects, levels, and languages. As a whole, the platform averages 10,000 downloads a day and the eduki team has been researching their impact over the past several years.

Accordingly, the data shows teachers strongly value teacher-created materials that can be adapted to different learning contexts. However, there's a challenge in quickly assessing which materials are actually adaptable versus just claiming to be. Teachers need practical guidance on how to modify materials for their specific classroom needs.

Additionally, there is a clear pattern showing teachers want materials that are easy to implement (for example, materials with "clear organization and structure" rate highly). At the same time, many teachers report increased time spent on resource integration, which suggests a gap between the promise of "ready-to-use" materials and the reality of implementation.

The data also illustrates that there is a connection between the material and professional development. Specifically, the data indicates teachers see material quality as tied to their own professional development. But there's often a disconnect between materials and professional growth opportunities on how that happens/could happen. This raises questions about how to better align material quality evaluation with teacher development.

Teachers are looking for context-specific evidence. Namely, teachers want evidence that materials work, but in contexts similar to their own. For many, generic effectiveness claims aren't sufficient and so there is a need for more granular, situation-specific evidence of impact. For example, a teacher who shares material in Bolivia on the eduki platform does not have the same experience or context as a teacher working in Germany. Teachers want evidence that the product works, but want the evidence to be useful within their own context.



"Teachers want evidence that the product works, but want the evidence to be useful within their own context [...] There is a need for granular, situation-specific evidence of impact."

> Lola Garay Abad Director of Educational Impact, eduki

At the same time, teachers are reporting spending increasing time finding appropriate materials. The marketplace currently lacks effective ways to match teachers with relevant, high-quality resources and current evaluation frameworks may not capture the practical information teachers need most.

In sum, these challenges point to a wider need for evaluation frameworks that:

- Consider practical implementation needs
- Include context-specific guidance
- Connect to professional development in an evident way
- Provide actionable evidence
- Support efficient material discovery

Jitske van Os Managing Director **Dutch EdTech** 



The <u>Dutch Edtech</u> foundation aims to connect the fragmented education and learning sector and stimulate acceleration of the EdTech field. With 140+ members, they play a key role in representing startup and scaleup founders within the broader Edtech ecosystem.

According to van Os, the Netherlands is already prioritizing EdTech innovation through key investments such as Npuls and National Education Lab AI (NOLAI), which aim to modernise education by embedding digital tools in primary, secondary, vocational, and higher education and supporting personalised learning pathways. Npuls is complemented by frameworks like the 3E (Enhance, Extend, Empower) Framework, which consists of an evidence-based evaluation of EdTech in HigherEd, and the <u>Trust Framework</u>, which promotes transparency and accountability in partnerships between EdTech providers and institutions. Together, these frameworks lay the groundwork for a more evidence-based, trust-driven ecosystem that meets the needs of educators while holding EdTech providers accountable in the context of the Netherlands.

Despite these advancements, challenges still persist. Through stakeholder engagement, the Dutch EdTech foundation has documented the following challenges:

- While established EdTech companies have the resources and networks to scale effectively, startups bring fresh innovation and agility but often struggle to navigate the complexities of education systems. The entrepreneurial drive to address critical gaps is admirable, but many founders face hurdles due to limited experience in learning sciences or cognitive sciences, which can make understanding the needs of educators and learners more challenging.
- There is a notable distinction between companies like MemoryLab, which originate from university research and bring a strong foundation in evidence-based practices, and more tech-driven companies that focus on innovative solutions but often lack experience within educational environments. While these "tech-push" companies develop impactful innovations, they may face challenges in proving the evidence behind their solutions or aligning their tools with the practical needs of educators and learners. Supporting these companies in bridging the gap between innovation and educational alignment is essential to maximising their potential impact.
- At the same time, research must also align with business survival, ensuring that companies can scale, sustain their impact, and thrive in a competitive landscape. Beyond product innovation, research should address how startups can navigate market complexities, meet the demands of stakeholders, and balance financial sustainability

with user-centered solutions. Without this alignment, promising EdTech innovations risk being short-lived or failing to reach their full potential in practice.

• Systematic approaches are often lacking. For example, at universities, they see promising technology being developed but left on the shelf because there is no clear pathway to implementation. Similarly, in vocational education, there is often a layer of misalignment between management and educators, making collaboration on EdTech decisions challenging.

To address these issues, the focus should be on assisting startups with education-specific guidance, implementing transparent procurement processes that move beyond ad-hoc pilots and focus on evaluating and scaling effective solutions. This work requires co-creation and a multi-stakeholder approach.



"We cannot just have one framework. We need to have co-creation and a multi-stakeholder approach."

> Jitske van Os Managing Director, Dutch EdTech

Finally, van Os argued that institutions and EdTech companies alike must adopt a more critical approach to evaluating the real added value of technology, especially as budgets tighten. Collaboration between staff, educators, and leadership—such as return on community initiatives (ROC)—can ensure that decisions reflect both classroom realities and strategic goals.

## **Part 3: Plurality of Perspectives**

Attendees were also presented with five-minute perspective statements from a diverse group of stakeholders, each sharing their motivations and insights. This format was designed to highlight the plurality of viewpoints represented, drawing on the extensive experience and expertise of leaders within the EdTech ecosystem. A key component of the session included a facilitated Q&A period following every four speakers, allowing the audience to engage directly with the presenters and further explore the topics discussed.

#### **EdTech**



Dr. Flora Refalvi
President
Edutech Hungary

<u>Edutech Hungary</u> works to foster connections between Hungarian and international digital education stakeholders and to facilitate the spread of digital educational technology to enhance the efficiency of learning and teaching. Their main activity involves supporting enterprises developing educational technology tools, solutions, digital educational content, and services, as well as facilitating their market entry.

The EdTech sector is a multifaceted and rapidly evolving domain that benefits from active and sustained dialogue among its diverse stakeholders. This dialogue is crucial for comprehending the sector's complexities and identifying pathways for its optimal development.

A key aspect of understanding EdTech lies in recognizing its diverse categories, which can be defined based on several parameters: profiles of stakeholders, legal frameworks, target age groups, geographical reach, primary objectives, organizational size, and more. This diversity makes the EdTech landscape inherently heterogeneous, with each category presenting unique opportunities and challenges.

Furthermore, the priorities of stakeholders within the sector often vary widely depending on their focus. For instance, viewing EdTech through the lens of content development leads to entirely different conclusions compared to a technology-centric or methodology-driven perspective. These varying approaches highlight the need for collaboration and dialogue to bridge gaps, align priorities, and foster a shared understanding of the future and best use of education technology.

## **Private Sector Framework Developers**

Dr. Pati Ruiz

Senior Director

EdTech and Emerging Technologies and Digital

Promise



<u>Digital Promise</u> is a global nonprofit working to shape the future of learning. The nonprofit works across research, technology, and practice to test new ideas, scale what works and expand

opportunity for every learning. For example, their League of Innovative Schools is a national network of over 150 superintendents, sharing and testing promising approaches to teaching and learning.

Digital Promise is motivated by the pressing need to bridge gaps in the evidence ecosystem. Through their work to date, they have observed a lack of clear, equitable evaluation frameworks for AI tools and insufficient capacity building for educators to be able to integrate these tools effectively.

The rapid development of AI presents immense opportunities, but also significant risks, especially for historically excluded populations. These challenges have motivated the nonprofit to do more, to ensure that AI adoption in education aligns with equity, transparency, and privacy principles, while creating meaningful learning experiences for all.

In response to those needs, Digital Promise has taken a collaborative, action-oriented approach. For example, they have developed an Al Literacy Framework that outlines essential competencies and strategies to integrate them across grades and subjects. They are currently piloting an ethically designed AI product certification, aiming for a 2025 release. Additionally, they are conducting research to identify and share best practices and policies to help educational leaders make informed responsible decisions about AI adoption with confidence.

Nonetheless, significant challenges remain. The rapid pace of AI innovation makes it difficult for policies and practices to keep up and digital divide threatens to exacerbate inequities in Al access. This inequity benefits cultural and systemic barriers and the need for more robust communication and governance frameworks persists. According to Dr. Ruiz, these challenges require that stakeholders continue to ask who is being left behind, and how we can course correct to ensure that AI serves the public interest.

As an organisation, Digital Promise is committed to robust collaboration with educators, families, developers, and policymakers. They aim to prioritise public interest technology and empower all communities to actively shape an AI-enabled future. "This is an effort worth pursuing," explained Dr. Ruiz. "Namely, so that AI can genuinely empower teachers and learners while advancing equity and inclusion."



## Dr. Joseph South

Chief Innovation Officer International Society for Technology in Education

At the International Society for Technology in Education (ISTE), there are several aspects motivating their work on the topics of evaluation and evidence.

First, even though they are seeing places where amazing, transformational learning is happening and there are effective solutions available, these solutions are not being systematically embraced. While there are pockets of innovation, the very best solutions are not being widely embraced, and they're being crowded out by other solutions which may have more marketing support but are not necessarily as impactful.

Second, in the post-COVID era, ISTE identified a significant number of education systems that invested heavily in EdTech. But, as funding decreased, they now are more discerning about which solutions they keep and, for the first time, have adopted a more critical perspective. This must be considered as a very important opportunity for the entire EdTech ecosystem.

Third, the teacher's voice is often systematically omitted from these decisions. In many cases, those making purchasing decisions involve the teacher at the last step, or in some cases, not at all. Yet, the teachers—and the students—are the primary end-users of most of these solutions and their voices must be championed.



"Often the people who are making purchasing decisions bring in the teacher at the last step, or maybe not at all. Yet the teachers and the students are the primary end-users of most of these solutions."

> Dr. Joseph South Chief Innovation Officer, ISTE

Fourth, solution providers need support in prioritizing what is most important as they are continuously balancing competing motivations and aspects, all while meeting their bottom line.. Therefore, if the buyers are not clear about what is important, it becomes very difficult for solution providers to prioritise their resources.

According to Dr. Joseph South, ISTE is addressing market needs by focusing on three key initiatives:

- 1. They recognize the importance of providing educators with a simple and effective way to discover, compare, and evaluate educational technology solutions. They power the EdTech Index, a free online database that consolidates information about products, including data from providers and independent third-party validators, in one accessible location. This initiative aims to streamline access to quality assessments for educators.
- 2. ISTE conducts extensive research on usability for both educators and students. They emphasize that even promising products cannot succeed in classrooms if they are not user-friendly. Their research examines two aspects: pedagogical usability, which ensures that tools facilitate effective teaching methods, and technical usability, which focuses on ease of use for students.
- 3. They also invest in collaborative efforts to involve more educators in the research and development process. They recently launched CoLab, a platform where education service providers and product developers can engage directly with educators from the

organization. Through feedback on prototypes and design reviews, educators offer valuable insights, while providers gain a deeper understanding of user needs. These interactions are mutually beneficial, as providers appreciate the direct input, and educators are ecstatic to have their voices heard.

One major challenge remaining is the need to aggregate market demand around high-quality validators. For meaningful change, the market must collectively define and emphasize what constitutes high quality, signaling to solution providers that purchases will depend on meeting these standards. Achieving this requires unity and consistency in messaging across the industry.

Another challenge lies in improving educators' literacy in understanding and using evidence. Educators need guidance on the types of evidence to seek, when to request it, and how to evaluate it against other important criteria. Building this capacity among schools and school leaders is a critical, ongoing need.

Additionally, educators face an overwhelming number of sources offering advice, often with conflicting perspectives. Greater alignment among those supporting educators is necessary to consolidate definitions of evidence and establish shared standards. This unified approach would make it easier for educators and education leaders to effectively navigate these complexities.

### **Public Sector Framework Developers**

## **Carlos Ferrari** Innovation Manager **UNICEF Global**



Carlos Ferrari, Innovation Manager at UNICEF Global, spoke about the new frameworks created by UNICEF: the EdTech for Good Framework. The framework was born out of partnerships with the Ministry of Foreign Affairs of Finland, and Arm, from the private sector. UNICEF also brought together experts, teachers, students and education leaders to validate these principles and guidelines by collecting and integrating feedback as part of the creation process.

Entrepreneurs can leverage this framework to design their solutions by using it as a guideline for how to integrate relevant criteria into their solutions. For investors or other decision makers who are trying to choose between different solutions, an assessment through this framework can guide which of the solutions are most available or appropriate. A key aspect of the framework is addressing the question, "Is this suited for our particular needs?"

To bring the framework into action, UNICEF also created the <u>Learning Cabinet</u>, which ensures that all of the solutions that go through the assessment of the integrated framework are widely accessible. Any stakeholder can utilise this online resource to evaluate the solutions, evidence that is provided, and compare solutions to then contact the companies directly.

#### **Research and Testing**



## Prof. Alison Clark-Wilson

Professor of Digital Education Institute of Education University College London

"Research," which Prof. Alison Clark-Wilson describes as "the systematic enquiry or knowledge" creation towards some (helpful) truths", serves two broad purposes within the EdTech sector.

Foundational research is research which often comes from the learning sciences or associated fields, which underpins aspects of the design or implementation of the EdTech product or service. By contrast, developmental research often takes the form of more agile research cycles that focus on topics aligned with the stakeholders' goals. The findings should ideally inform aspects of: the product design, or its implementation, or a teacher support programme, or future funding, among others.

At the heart of any developmental research lies focused aims that inform the methods – what to test and how. To achieve this, the testing needs to:

- Serve a wide range of stakeholders' needs (beyond the obvious beneficiaries, such as teachers and learners). For example, the researchers may need to publish the findings, the EdTech company may need direct feedback from teachers and students, the policy makers may want to use the findings to inform policy decisions or funding.
- Involve different stakeholders to enable them to realise the value of the testing opportunity.
- Integrate educational researchers, who bring a diversity of methods to the testing approach.
- Be available at scale there are thousands of EdTech companies across the world that would welcome supportive spaces to help them design (and learn from) piloting opportunities in real classrooms and learning communities.

One such approach is through more systemic EdTech Testbeds, such as Helsinki Education Hub, Swedish EdTest, the Swiss National EdTech Testbed, and newcomer Belgium-based <edtech/station>. These organisations are all members of the Global EdTech Testbed Network, a learning community focused on sharing research and best practices.

#### **Practitioners**

## **Dr. Panagiotis Karamalis**

School Leader PALLADIO School



A private school leader at PALLADIO School in Athens, Greece, Secretary General of the Hellenic Institute of Independent Schools, and a representative of the European Federation of Education Employers, Panagiotis Karamalis shared his insights on adopting EdTech within school settings. Drawing from over two decades of experience, he highlighted the challenges decision-makers face, including balancing stakeholder opinions, managing resources, and encouraging innovation among employees.

He also discussed common reasons for EdTech failures, such as resistance from teachers and parents. Teachers, he said, are conservative when they are required to get out of their teaching comfort zone. At the same time, parents often project their own educational experience to present conditions and expect the means, procedures, and even the subjects to be the same as they used to be - leading to reluctance to change involving technology.

Another reason that EdTech implementations fail is that there is frequently a mismatch between EdTech solutions-namely between their features and educational objectives. In some cases, solutions are built for technological excellence rather than adapting to simple classroom needs. However, the goal should always be innovation and new approaches, not technology per se. Relatedly, Dr. Karamalis explained that there is still a lack of evidence-based proof of the impact of EdTech, in general and per solution. Currently, there is no consistent and universal way to evaluate an EdTech solution, application, implementation, or innovative practice.



"Solutions that work and reach a point where innovation is widely and structurally adopted [...] share some common characteristics, including reliability, simplicity and relevance."

> Panagiotis Karamalis School Leader, PALLADIO School

What makes EdTech solutions succeed? According to Dr. Karamalis, solutions that work and reach a point where innovation is widely and structurally adopted in the organisation share some common characteristics, including reliability, simplicity, and relevance. In terms of reliability, solutions should be robust, user-proof and function constantly without much support. Successful solutions are often turn-key; they do not require tech-savvy people to operate them or use all their features. Finally, solutions should be relevant; giving answers to specific, implementable, practical aspects of the educational ecosystem.

Concluding with a critique of overregulation, he expressed concern about policies like smartphone bans in classrooms, which he argued hinder digital transformation and innovation, particularly in under-resourced areas. He called for balanced policymaking to support equitable and forward-thinking education. "We must prevent overregulation," he concluded. "It is not fair for the teachers or the students."

#### **Tech Providers**



## **Rasmus Borch**

EMEA Education Solutions Manager Lenovo

Having spent the last 20 years in education - initially as a teacher, Borch now sits on the business side at Lenovo, where he engages with the largest user market in any industry: education. Education has the highest number of users, yet it is also the sector with the least professional use of IT.

There are many reasons for this, but one which is usually overlooked is the fact that most technology purchases in education focus on the hardware specifications and the price alone. While this will help reduce immediate cost it also disregards the high level of complexity and wider effort needed to succeed and often ends up being unsustainable in the wider sense.

Making technology really matter in education requires a much more holistic, coherent and encompassing approach than what has been the general practice. As technology makes huge advances in so many different industries, the results in education are generally not living up to what has been hoped for.

In contrast, when large companies implement IT solutions, they do so robustly. Unfortunately, this is not a practice often observed in education and according to Borch, there are specific reasons for this disparity. First, it is necessary to let go of outdated traditions. Second, in education procurement, the primary goal for institutions is often to save money. In tenders, eighty percent of the criteria typically focus on price. He emphasised that you get what you pay for: "If we aim to build comprehensive solutions, we cannot treat it like purchasing toilet paper."

The end goal should be to create tenders that genuinely seek real solutions, not just a few devices. This is crucial, and he stressed that this is one of the biggest challenges at the moment. In his words: "When we talk about solutions, we often think of them as definitive answers. However, I believe we need to adopt a circular, regenerative approach to designing and learning about solutions. This perspective should cater to the needs of every individual, promoting equity and addressing aspects that have not received much attention in discussions to date."



"We need to adopt a circular, regenerative approach to designing and learning about solutions."

> Rasmus Borch EMEA Education Solutions Manager, Lenovo

Borch believes that we are approaching a shared understanding of these challenges, and that it is essential to engage in discussions about how we design these solutions and the parameters that are included. From his perspective, an overly simplistic linear approach will inevitably lead to everyone involved feeling behind.

The goal should be to rethink the approach to EdTech solutions and move towards a circular, regenerative mindset that considers the needs of all stakeholders and fosters equity. This shift is vital for creating effective educational solutions that truly serve our communities.

#### **Funders**

Isabella Vahdati Associate **Brighteye Ventures** 



Brighteye Ventures is one of the most active EdTech-focused venture capital funds in Europe. They invest in Seed and Series A stage companies. The fund was formed in 2017 after seeing that significant money was being invested in EdTech in the United States, but not in Europe.

As a whole, Brighteye Ventures is excited about the opportunities that EdTech offers. In particular, they see that AI has created more opportunities than ever before, enabling people to learn faster and more effectively. As Vahdati explained, students have the ability to access learning opportunities in new and unprecedented ways. Teachers, too, have benefited from these changes deploying technology to save time and personalise learning experiences.

The second reason that AI is interesting to Brighteye Ventures is because it is changing the career landscape at an unprecedented speed. Up to two-thirds of jobs are potentially going to be replaced by AI. This means that people are going to need to upskill, as well as gain skills in new areas and sectors, to stay competitive. Additionally, AI has allowed for training to be delivered just-in-time, providing support for learning both on-the-go and when it is needed most.

The skill shortage is frequently being cited as one of the biggest bottlenecks for enabling actors at all levels to hit net zero targets. For example, there is a significant shortage of workers in roles

such as heat pump installers or solar installers—all of which are vital to a (greener) economy. As Vahdati pointed out, roles that have been historically looked down upon are becoming increasingly important.

Another sector of interest to Brighteye Ventures is the pre-kindergarten segment of EdTech. According to Vahdati, this is because up to 90 percent of early year enrollment happens before the age of five. Yet, only 6 percent of public education funds students in those early years. There is, therefore, a huge opportunity in this particular segment. Despite this opportunity, many EdTech startups are struggling to succeed due to the challenging requirements of the complex customer base.

The companies Brighteye invests in also need to aim to be hitting 100 million euros in revenue within 10 years of investment. That is not an easy task, particularly in the EdTech sector, when decision making is often institutional and slow-moving. As a result, Vahdati estimates that the fund has invested in less than 1 percent of the companies that they meet with.

#### Alliances



Miriam Gómez-Lavín Global Partnerships and Fundraising ProFuturo Foundation

The ProFuturo Foundation, established in 2016 by Telefónica Foundation and "la Caixa" Foundation, is a Spanish organization dedicated to closing the global educational gap. Its mission is to provide innovative technology-driven education programs to children in vulnerable situations. Currently present in 39 countries, ProFuturo focuses on scaling its impact across 14 key countries by 2026.

The foundation's comprehensive program includes technology (hardware and platforms for classroom use), curated educational content, teacher capacity-building initiatives, and a supportive network for educators and school principals. Additionally, ProFuturo provides essential resources for refugees in addition to supporting a knowledge-sharing community.

Gómez-Lavín highlighted how strategic alliances play an integral role in ProFuturo's mission to drive education forward. Specifically, the Foundation builds four key types of partnerships:

- 1. Educational and technology partners enhance the foundation's educational and technological capabilities, such as Moodle's integration and the development of digital competency tools with the Centro de Inovação para a Educação Brasileira (CEIB).
- 2. Implementing partners, like World Vision and Save the Children, localize and execute projects in various countries.

- 3. Positioning and network partners, including the UNHCR and the World Bank, advocate for digital education on public agendas.
- 4. Funders and co-funders provide financial and in-kind support at both local and global levels, enabling the foundation to expand its reach and impact.

Through these alliances, ProFuturo advances its mission to transform education for underserved communities worldwide.

## **Part 4: Clarifying Challenges**

One of the most effective formats the EdTech Strategy Lab uses to foster shared understanding and collaboration on topics of evidence and trust is an interactive ideation exercise called *Clarifying Challenges*. This format, deployed at almost a dozen events since March 2024, is designed to help participants develop a clear and common understanding of key challenges facing the EdTech ecosystem related to the topics of trust, evidence, and partnerships.

The *Clarifying Challenges* format is a collaborative workshop designed to foster diverse stakeholder engagement and knowledge exchange. At the *Empowering the Ecosystem* event, it consisted of two key parts: 1) ideation and discussion and 2) plenary group sharing. Groups, composed of 8-15 participants, were focused on exploring the needs and requirements of specific stakeholder groups and divided accordingly.

Group No.	Stakeholder Perspective	Table Lead
1	Students	Juliette Norrmén-Smith, Associate Project Officer, UNESCO
2	Researchers	<b>Dr. Natalia Kucirkova</b> Co-Founder, International Centre for EdTech Impact
3	Framework Developers, Public Sector	Carlos Ferrari Innovation Manager, UNICEF Global
4	Framework Developers, Private Sector	April Williamson Project Director, Digital Promise Global
		Michael Forshaw Chief Executive Officer, EdTech Impact
5	Practitioners	<b>Dr. Anissa Moeini</b> Founder, Goldstar Education
		Alison Clark-Wilson Professor of Digital Education, UCL
6	EdTech Developers, Startups	Juan Luis Vilchez EMEA EdTech Lead, AWS
7	EdTech Developers, Multi-National	<b>Dina Ghobashy</b> Director of Global Education Transformation, Microsoft
8	Funders	Jawad Asghar EdTech and AI Lead, Bill & Melinda Gates Foundation

Participants self-selected their groups, and the ensuing discussions were aimed at encouraging collaborative ideation while addressing specific stakeholder needs or high-level concepts. The guiding questions were:

- 1. What are the needs of your particular group in relation to EdTech evaluation?
- 2. What are the actions that can be taken to address these needs?

Key to the format's success were the pre-assigned Table Leads, facilitators who guided discussions, synthesized ideas, and presented key insights to all participants after the discussions concluded. Insights from these discussions will be included in the final report of the 2024 EdTech Strategy Lab research series.













### Fireside Chat: Shaping the Future with Helsinki Education Hub



**Beth Havinga** Managing Director European EdTech Alliance



Niko Lindholm FdTech Innovation Lead Helsinki Education Hub

Following the Clarifying Challenges workshop, Beth Havinga, and Niko Lindholm, EdTech Innovation Lead at Helsinki Education Hub (HEH), sat down for a fireside chat focused on shaping the future of evidence implementation and digital education practice.

Havinga started the conversation by advocating for integrated testing and development environments in education. She took the opportunity to introduce Lindholm, who is behind the pioneering work of HEH in Finland. In her introduction, she commended the Hub's ability to bring together multiple facets of the education ecosystem to foster creation, design, and effective feedback loops. According to Havinga, "the Helsinki Education Hub exemplifies what it means to integrate different elements of educational systems into a cohesive whole." This statement set the stage for Lindholm to explain the model, particularly its approach to co-creation, education development, and incubation.

#### **Building an Ecosystem for Innovation**

To explain the Hub's model, Lindholm began by recounting the 13-year journey of establishing an ecosystem for education innovation. The process, he explained, involved years of trial and error, adding components like the Entity Initiative Program, which combined technical expertise with iterative testing environments. It took four years just to build a foundational testing framework.

Through perseverance and collaboration, the HEH emerged as a sustainably funded organization, supported by the University of Helsinki and the City of Helsinki. Lindholm underscored that this dual public partnership was vital for its success, enabling the Hub to serve as a nexus for extracurricular education programs, research, and innovation.

"We're running two cohorts of teams—both internal and external to the university," he explained. These early-stage startups undergo a rigorous process that blends learning sciences with product development. "Each team develops a theory of change under the guidance of faculty and students. This ensures that every solution has a 'learning science DNA,' grounding it in research and pedagogy."

#### **Testing, Scaling, and Supporting Innovation**

Lindholm detailed how the program moves from theory to application, with solutions tested across 120 public schools in Finland, spanning early childhood to vocational education. The three-month incubation process helps refine both the technological solutions and the teams' understanding of educational science.

He also shared that they aim to support "educators and innovators who understand how to work collaboratively". This approach creates a cooperative management framework that participants can adapt to broader issues in education.

Havinga inquired about the Hub's sustainable funding, a key factor in its longevity. Lindholm explained that the initial funding came from the EU and local innovation funds. Gradually, as the Hub demonstrated tangible returns—such as job creation and scalable solutions—the City of Helsinki and the university became long-term supporters. "The city sees this as a return on investment," Lindholm said, "while the university integrates it into its mission of fostering innovation."

#### **Challenges and Future Plans**

Reflecting on the program's challenges, Lindholm shared the importance of collaboration between entrepreneurs and educators. "Initially, we lacked the involvement of faculty and researchers, which hindered our ability to align solutions with real-world needs." Over time, the Hub built these connections, ensuring that EdTech developers not only support schools but also benefit from Finland's rich education ecosystem.

However, the small size of the Nordic market poses limitations. "Finland, with just 5.5 million people, isn't a large enough market for the companies we're cultivating," Lindholm explained. The Hub's solution is to partner with like-minded organizations globally, ensuring that the innovations developed in Finland can scale internationally.

"We want partners who share our commitment to research-based solutions and learning science," he emphasised. These partnerships aim to make Finland a global R&D hub for education, where startups refine their solutions before expanding to larger markets.

#### **Balancing international and local needs**

Havinga concluded by asking how the program balances international and Finnish educational philosophies. Lindholm highlighted the importance of alignment: "If a solution doesn't align with Finland's curriculum or values, there's no point in pursuing it. We're selective about the international players we work with, ensuring their goals match ours."

He also acknowledged the bureaucratic hurdles for non-EU companies entering Finland, which the Hub addresses through its "soft landing services." This initiative streamlines processes for foreign startups, enabling them to integrate quickly into the ecosystem.

After two decades in education innovation, Lindholm emphasized the importance of sharing insights and creating spaces for collaboration. "I encourage everyone to explore what's happening at the HEH. Let's connect, review, and share ideas to advance education together."

## Part 5: Stakeholders and Continued Engagement

#### Vision for 2025

A key focus of the Digital Transformation Collaborative (DTC) and the broader Global Education Coalition (GEC) is promoting sustained action in partner countries. Juliette Norrmén-Smith, Associate Project Manager in UNESCO's Education Policy section, emphasized the DTC's use of the six-pillars framework—co-developed with its partners—as a foundation for creating competency programs that help education leaders and policymakers in their work.

Moving forward, the DTC aims to incorporate findings from this event's discussions on evidence ecosystems, integrating the diverse perspectives shared, the challenges identified, and the actions proposed. These insights will inform the in-country workshops co-created with local governments, a model UNESCO has successfully implemented in Cairo, Rabat, and Tunis, with plans for expansion. Collaborating with the European EdTech Alliance on the *Empowering the Ecosystem* event underscores the DTC's commitment to these efforts.

Even as the current EdTech Strategy Lab cycle concludes, UNESCO remains dedicated to sustaining these knowledge-sharing platforms and multi-stakeholder collaboration. Mechanisms like the GEC, the DTC, and the Global Alliance for the Science of Learning will continue to play a pivotal role. Future opportunities include the <u>annual GEC meeting</u> on March 24, 2025, where participants were invited to engage in further dialogue and action.

Building on the points made by Norrmén-Smith and providing a summary from the science of learning perspective, Dr. Sonia Guerriero, Senior ECD and Education Specialist at UNESCO, was invited to the stage. She returned to the learning challenges at a global level which were introduced by Gwang-Chol Chang, Section Chief for Education Policy earlier the same morning.

According to Dr. Guerriero, these challenges were the precursor for the first meeting of the Global Alliance on the Science of Learning for Education in October 2023, when UNESCO had invited a small group of interdisciplinary scientists together to see what they could learn from them to improve education policies and practices. Within a year, this group tripled in size, and had met for two days just prior to the Strategy Lab *Empowering the Ecosystem* event. During the meeting, a sub-session on digital learning technologies highlighted several key takeaways:

- Collaboration must continue and include all stakeholders–EdTech developers, practitioners, policymakers, and researchers–to drive innovation and impact.
- It is necessary to recognize that scientists do research, but that a lot of other educators also do. It is therefore vital to integrate insights from diverse disciplines. This includes studying not just the brain itself, but also at how it processes information, learns in specific contexts, and interacts with different digital and non-digital tools and resources.

To improve education globally, it is not possible to do it alone, she reminded attendees. This work can only be done meaningfully when there is substantial collaboration between stakeholders across the educational ecosystem.

## **Closing Remarks**

In her closing remarks, Beth Havinga, the European EdTech Alliance's Managing Director, shared that the EdTech Strategy Lab will be transitioning into a new phase next year with an emphasis on understanding the needs and requirements, as well as communication ideals, shared by key stakeholders. The primary objective will be to map these insights and share them with developers, policymakers, and researchers to foster impactful change.

A central goal for the next phase is to enhance the visibility of existing initiatives while serving as connectors and knowledge brokers. The European EdTech Alliance will continue to spotlight existing efforts, bridge gaps between them, and create stronger networks of collaboration, supporting the work of the DTC and the Global Education Coalition in the process. Through the development of spaces and methods for knowledge exchange, the EdTech Strategy Lab will continue to empower organizations and individuals to communicate more effectively, facilitating meaningful dialogue and collaboration.

Building on this foundation, the Strategy Lab will move from a theoretical focus to more practical implementations. This includes creating platforms and practices that foster direct engagement, evidence-sharing, and collaboration among diverse stakeholders. The initiative will also continue strengthening ties with the learning sciences and other educational innovations to support educators and agents of change. These efforts aim to make communication and knowledge sharing more impactful and accessible, paving the way for more collaborative and sustainable outcomes.

Closing the day, Borhene Chakroun returned to the stage to express his gratitude for engagement and willingness of participants to take on and engage with different stakeholder perspectives. It is hoped that this exercise offered a deeper appreciation of the complexity involved in bridging diverse groups to create a robust ecosystem for quality and inclusive EdTech. He emphasised that UNESCO's commitment remains steadfast in supporting knowledge and exchange and creating multistakeholder spaces, with the GEC serving as their primary mechanism for achieving this goal.

Chakroun also pointed out that knowledge exchange alone will not be enough. It is also necessary to translate these insights into sustained, practical actions that support countries in their efforts to improve education. This focus on implementation is a cornerstone of the work of the Digital Transformation Collaborative (DTC). The vision for the DTC is to build an alliance of multistakeholder groups in every country, bringing together researchers, policymakers, EdTech developers, teachers, and evaluators to ensure that technology is tailored to meet the unique needs of each education system.

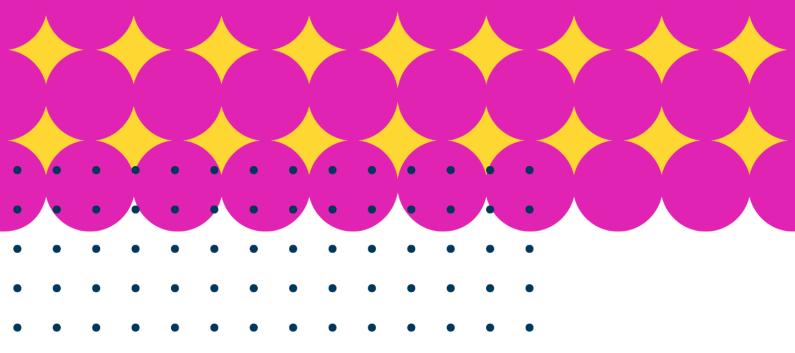
Beyond national initiatives, Chakroun shared that UNESCO and the DTC aim to build an alliance of EdTech alliances. Excited to collaborate with groups like the European EdTech Alliance, there is a pressing need to establish global mechanisms that connect regional EdTech networks. That is why he calls on the EdTech community to contribute to this effort, ensuring that the collective EdTech voice is institutionalized inclusively in global discussions about improving education for every child worldwide. Together, the aim is to move toward a future where technology truly transforms education systems in meaningful and equitable ways, leaving no one behind.

## **Key Takeaways**

As a whole, the event highlighted several critical insights into the challenges and opportunities in the EdTech space:

- Building trust and collaboration across a diverse set of stakeholders—educators, policymakers, researchers, tech developers, and learners—is essential for a sustainable and successful EdTech ecosystem.
- The digital transformation of education requires alignment among stakeholders to effectively bridge research, policy, and practice, ensuring evidence informs decision-making.
- The development and implementation of EdTech solutions needs to be an iterative, multi-stakeholder process.
- Bridging the gap between research and practice is vital, with foundational research establishing evidence for effective solutions and developmental research ensuring products align with business needs for scalability.
- Evaluating EdTech requires understanding the diverse needs and contexts of stakeholders and education systems, rather than relying on a one-size-fits-all framework.
- Further collaboration that includes all kinds of stakeholders around the topics of trust and evidence in EdTech is necessary, especially with the goal to better understand key needs of stakeholders and how best to communicate with them.





The European EdTech Alliance (EEA) together with the Jacobs Foundation is exploring trust and evaluation mechanisms as a method to increase evidence-informed decision-making practices within education through the EEA's EdTech Strategy Labs Project. This article stems from global research, and European-wide workshops, listening sessions, and interviews conducted throughout 2024.

The European EdTech Alliance is a not-for-profit consortium of EdTech trade associations, clusters and organisations that represents more than 2600 EdTech start-ups and established companies across nearly 30 countries in Europe. The mission of the European Edtech Alliance is to support sustainable innovation and growth of the European EdTech sector, and to connect and strengthen the pan-European EdTech ecosystem. Through enabling cross-border cooperation and investigating policy needs within Europe, the goal of the Alliance is to achieve a higher quality, equitable and accessible education for all.

We are grateful for the funding of the Jacobs Foundation to realise this project, and to UNESCO for hosting both our initial and our final Strategy Lab workshops for this year. The EEA looks forward to further addressing these challenges with UNESCO's Digital Transformation Collaborative (DTC).

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