Evidence-Based EdTech Diagnostic

Ready Recommendations
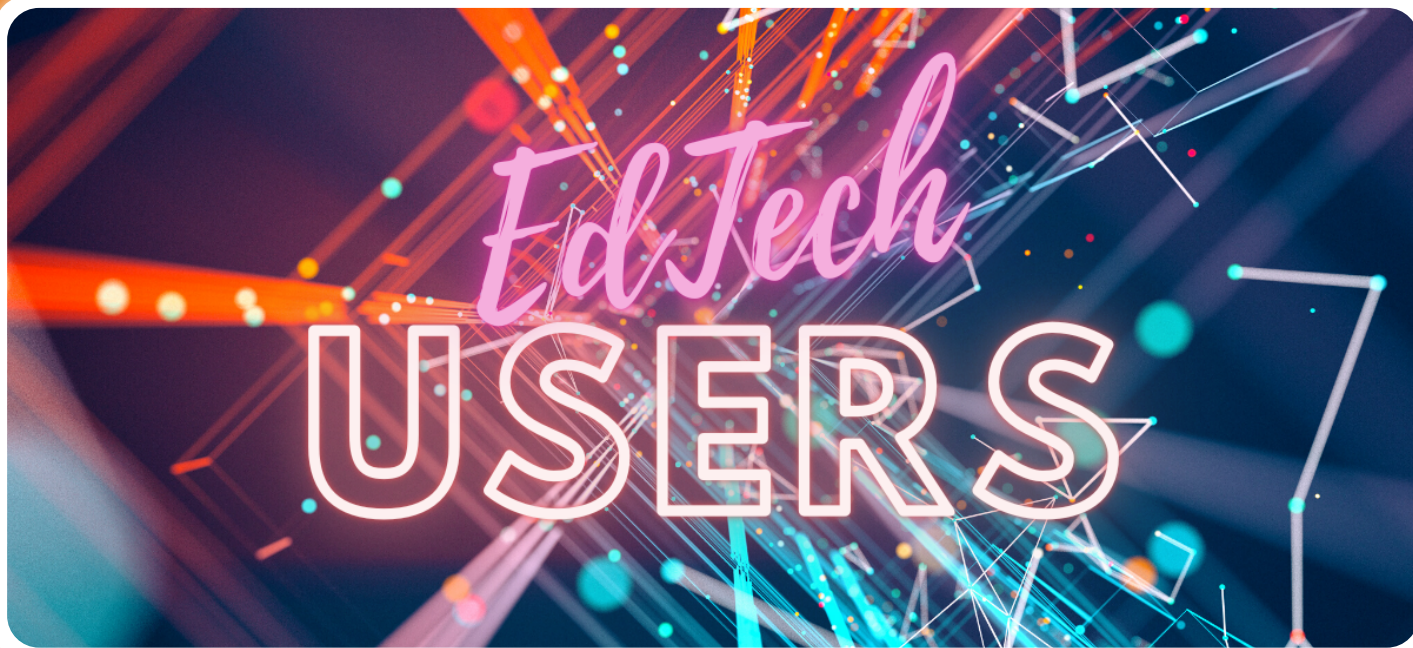
Evidence in EdTech

- Evidence of the **impact** of EdTech on teaching and learning is often at the forefront of **demands,** particularly from those who dictate the **funding** available to pay for technology within education. As has been shown in numerous **meta-level investigations,** (see for instance Cox et al., 2003), evaluation of the impact is a **challenge.** This is magnified when evaluating **emerging innovative technologies**

- **Pedagogical change** is at the core of these technologies, both because their design evolves over **time,** but also, arguably, their raison d'être is to **transform the learners' experience** (Cukurova & Luckin, 2018)

- The increased challenge is at least partially due to the **unwritten expectation** that, in traditional impact evaluations, evidence regarding the impact of an intervention is considered as a **shield against change.** The generation of **scientifically robust evidence** can be used by stakeholders, such as policymakers, for an educational intervention's **standardisation** and **scaling**

- **Change** is the essence of emerging technologies, though. Three years after an original report reviewing emerging technology innovations in education (Luckin et al., 2012), there was evidence that only **39 of the 150 innovations** (26%) were still in active use. Therefore, in the context of emerging technologies, more **value** is to be found in the careful consideration of different **types** and **sources** of evidence that are appropriate to the **current state of the technology** as well as in the use of **robust research methods** to generate **new evidence**

- This requires an **evidence-informed decision-making process** for the **design and use of EdTech,** rather than only considering evidence as the **outcome of the evaluation**

- Taking into account the peculiarities of the **local context,** the accumulated experience and judgment of **educators,** and the perspectives and values of **users,** and combining these three with the fourth source, **the best available research evidence,** can provide a more productive way forward in the attempt to bring evidence into **educational practice**

- Excerpt from '**Evidence & the Golden Triangle of EdTech, (EDUCATE, 2021)'** by Professors Cukurova, Luckin, Clark-Wilson

EDUCATE

Who can help me?

The EDUCATE Programme promotes **excellence** in the EdTech community by providing **training** and **mentoring** to support and promote the use of **evidence-informed EdTech.** Our research-focussed programme, based on the **Golden Triangle,** bridges the gaps between **EdTech designers** and **developers, researchers in education and EdTech,** and **users,** to ensure that EdTech products live up to their **promises.**

To find out how you can benefit from examining your school or business through a **'research and evidence mindset',** and focussing on **'what works',** contact the **Accelerator Team** at EDUCATE Ventures Research today:

hello@educateventures.com

Thanks for reading!

- **The EDUCATE Ventures Research Team**

Summer 2022

Further Reading: Basic

What is EdTech?

- Wikipedia: Educational Technology

  - Educational technology (commonly abbreviated as edutech, or edtech) is the combined use of computer hardware, software, and educational theory and practice to facilitate learning. When referred to with its abbreviation, edtech, it is often referring to the industry of companies that create educational technology

- Holon IQ: EdTech in 10 Charts

  - Everything you need to know about the global EdTech market in 10 charts

- Promethean: the State of Technology in Education 2021/2022

  - After a period of reactivity and a steep learning curve, educators finally had a moment to catch their breath in 2021. The result? A genuinely holistic approach, one that champions the benefits of edtech: personalisation, engagement and interactivity. One that's ready to react at short notice. And one entirely underpinned by class-based pedagogy and, most importantly, pupil wellbeing

EdTech in Schools

- The EdTech Podcast: Digital Strategy in Schools

  - In the above episode, host Sophie Bailey talks to Al Kingsley, author of My Secret Edtech Diary, MAT Leader and Edtech CEO. They discuss essential questions you should be asking around EdTech, practical considerations for funding and implementing EdTech, and how to create change through informal and formal channels, without doing it all yourself

- Global EdTech: EdTech in 2021

  - The picture of EdTech's penetration in schools and homes in 2021, in the middle of the Covid Pandemic, delivered by the founder of EDUCATE

- CPE RewirED Talks: Technology in Education Reform

  - As part of the lead-up to the RewirEd summit in December, Cambridge Partnership for Education is hosting a RewirEd Talk, a pre-recorded online panel discussion on the topic of Technology in education reform

Evidence & Data from EdTech in Schools

- EVR: AI Readiness Diagnostic: Step 4 - Collect: Basic Recommendations

  - 'Data collection needs to be designed carefully and must complement that data which is already available.' Although this recommendation is from the AI Readiness Diagnostic, the principles laid out here, including ethics and further considerations, are a useful set of instructions for thinking about data capture, especially in an educational setting

- LSE: EdTech in Schools - a Threat to Privacy?

  - Velislava Hillman, a visiting fellow at the LSE, argues that it is essential to consider the implications of the increasing use of technology within schools, along with the motivations of EdTech companies

- Digital Promise: EdTech Pilot Framework

  - The Edtech Pilot Framework provides a step-by-step process to help education leaders and technology developers run successful educational technology pilots

Further Reading: Aware

Below you can find a selection of resources, books, podcasts, webinars, and research papers appropriate to your stage of EdTech use. Good luck!

More EdTech Use Cases

- DfE: Future Opportunities for Education Technology in England

  - In December 2021, the UK Department for Education appointed Ecorys UK to undertake this research project. It aims to provide insights to the future of the EdTech market in England, considering likely developments in digital technology and education policy

- EDUCATE: Buying the Right EdTech for Your School Guide

  - In EVR's guide to buying the right EdTech for your school, we've created a structured assessment framework for you to follow when thinking about what EdTech products to purchase, to help you avoid some of the common mistakes that are made when it comes to buying EdTech

- Bett/EdTech Impact: 2022 Buyer's Guide

  - EdTech Impact is an independent review platform for EdTech worldwide — designed to help educators find the best solutions, and push companies to up their game. They have created this buyer's guide to help you make the most of the Bett Show 2022 experience, and provide a systematic process for choosing the right EdTech for your school. *Although Bett 2022 has now past,* the principles in the guide remain valuable information

Measuring EdTech Effectiveness

- EDUCATE: Evidence & The Golden Triangle of EdTech

  - Referenced on the first page above, this addition to the EVR Byte-Sized EdTech Research Library begins by explaining why it is necessary to bring the three communities encompassed by the Golden Triangle together: those who build EdTech; those who use the EdTech; and those who understand how to make judgements about whether an EdTech intervention contributes positively to teaching and learning

- Nesta: What is the Evidence for EdTech

  - A blog from former EDUCATE staff and project staff of Nesta ask what evidence should be asked of EdTech companies

- Measuring the Effectiveness of Educational Technology: What are we Attempting to Measure?

  - A research study from Toronto University Associate Professor Jodie Jenkinson, this paper reviews experimental studies drawn from personal experience where an attempt has been made to measure the efficacy of educational technology. In examining the shortcomings of these more traditional experiments, we can then apply this understanding to characterizing a more flexible approach to evaluation and its potential in measuring the effectiveness of educational technology

- Pre-emptive Intervention and its Effect on Student Retainment and Retention

  - A research study conducted during the first phase of EDUCATE's Accelerator Programme with research mentors and alumni company Tassomai, the paper describes how a small EdTech company worked with academics, combining technological expertise, science content expertise, pedagogy and social research methodology to develop and evaluate the effect of video feedback on learners' ability to answer science questions correctly

- GESAwards UK 2021/EDUCATE: EdTech Roundtable

  - A short panel discussing the essential need for evidence with highly successful EDUCATE Programme alumni

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Digital Strategy & Data

- Dfe: Exploring Digital Maturity in Schools Using EdTech Data

  - A report on the creation of a metric to measure digital maturity in schools, based on data from the DfE's EdTech survey of 2020-21

- DfE Ireland: Digital Strategy for Schools to 2027

  - This report builds on the achievements and ambition of Ireland's previous strategy for schools and aims to further support the school system to ensure that all learners have the opportunity to gain the knowledge and skills they need to successfully navigate an ever evolving digital world. The strategy has been developed following a wide ranging and extensive consultation process and sets out high level objectives under three key pillars. This link also provides a quicksheet for an overview of the strategy

- ISTE Standards for Educators & Students

  - Two links from ISTE, based in the USA. The educator section of the ISTE Standards provides a road map to helping students become empowered learners. The standards will deepen practice, promote collaboration with peers, challenge educators to rethink traditional approaches and prepare students to drive their own learning. The student section is designed to empower student voice and ensure that learning is a student-driven process

- EVR: AI Readiness Diagnostic: Step 4 - Collect: Ready Recommendations

  - 'Data collection needs to be designed carefully and must complement that data which is already available.' Although this advanced set of recommendations is from the AI Readiness Diagnostic, the principles laid out here, including ethics and further considerations, are a useful set of instructions for thinking about data capture, especially in an educational setting

Technology, Data & Intelligence

- Machine Learning & Human Intelligence

  - Professor Rose Luckin's 2018 publication, the book proposes a framework for understanding the complexity of human intelligence. In it, Rose identifies the comparative limitations of AI when analysed with this framework and offers recommendations for how educators can draw on what AI does best to nurture and expand human capabilities

- EDUCATE: AI for School Teachers Byte-Size

  - An easy-to-read 10-page byte-sized summary of the book of the same name, written by Professors Rose Luckin, Mutlu Cukurova, and Headteacher Karine George, members of the EVR senior team actively developing and using the AI Readiness Framework for working with data

- AI for School Teachers

  - The complete book on the AI Readiness Framework, specifically for teachers and headteachers in schools. It will help teachers and heads understand enough about AI to build a strategy for how it can be used in their school. Though it is pitched to teachers and contains familiar examples, the approach should still be used by education and training businesses working with technology