ELEVATING EDTECH INVESTMENT: PRIORITIZING EVIDENCE-BASED PRACTICES FOR LASTING IMPACT

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Disclosures:

Natalia Kucirkova is Co-Founder and CEO of WiKIT and involved in various academia-industry partnership research projects, including those that involve EdTech investors. In 2024, Natalia acts as the 2023-2024 Tools Competition judge .

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INTRODUCTION

The key conclusion from the UNESCO GEM 2023 report was that "there is little robust evidence on digital technology's added value in education". The proliferation of low-quality learning tools, as highlighted in the report, underscores the limited impact of technology investments on learner outcomes. Moreover, criticisms from academics (e.g. Williamson and Komljenovic, 2023) suggest that investors may have historically prioritised rapid scaling without adequate documentation or consideration for EdTech impact.

As both an academic and the CEO of a network collaborating with investors and their portfolio companies, I believe that attributing low impact solely to investors would be inaccurate. EdTech investors are unique in their focus on impact in education, distinguishing them from typical investors solely driven by profit. If EdTech investors' primary goal were solely profit-driven, they would likely invest in other areas such as Fintech, for example. However, there's room for improvement to ensure that the desired impact materialises.

In this report, my goal is to present aspirational models for both investors and academics to consider. Some of these models are already in practice, while others are in early stages, and it is my hope that this report encourages their adoption. I advocate against framing the relationship in EdTech as a tug of war between investors' influence and academics' work on impact. Instead, collaboration is essential for advancing scalable technology that collectively propels the industry forward and, ultimately, benefits children.

Ultimately, this report serves as an invitation for increased dialogue between investors and researchers. As a concise report designed to initiate discussions, it intentionally refrains from providing a comprehensive overview of practices or debates. Drawing on my and colleagues' work, I highlight some inspirational examples from recent collaborative and co-funding efforts. The snapshot approach is deliberate, aiming to prompt others to contribute to the ongoing conversations on how these vital stakeholders —researchers and investors— can collaboratively enhance EdTech for children.

The aim of this report is to contribute to the ongoing debate regarding funders and investors' role in EdTech impact with a constructive and participatory outlook on what might be possible if researchers and investors collaborate on advancing EdTech's impact on learners. As stakeholders navigate the intersection of education, technology, and investment, it becomes crucial to engage in constructive discussions that safeguard the integrity of research and ensure that evidence is not merely a tool to promote a specific agenda but rather a means to enhance the quality and effectiveness of education. Against this backdrop, this report provides suggestions for how, through direct engagement with researchers and research partners, investors could catalyse and improve EdTech's impact on education.

Delineations in the report

To streamline the report's content, it specifically addresses EdTech tailored for K-12 learning and teaching, with research scope confined to the learning sciences.

As for the focus on "evidence and EdTech funding", the focus is on impact-related metrics and approaches. When it comes to EdTech funding, from pre-seed to Series B or C, Forman (2023) explains that the typical metrics that funders require relate to:

- Product-Market Fit (PMF) Survey Scores or Net Promoter Score (NPS): Investors want to see high scores indicating strong customer satisfaction and loyalty.
- Monthly Active Users (MAU), Weekly Active Users (WAU), Daily Active Users (DAU): Investors are interested in the level of user engagement and retention.
- Retention Rates: Investors look for low churn rates, particularly in SaaS models, and negative churn on a dollar basis.
- Monthly Recurring Revenue (MRR) or Annual Recurring Revenue (ARR): Investors want to see steady growth in revenue, typically ranging from $10K-$100K MRR or $100K to $1M ARR at the seed stage.
- Market Size and Segmentation: Investors seek a clear understanding of the addressable market size and nuanced knowledge of different market segments.

These *business metrics* differ significantly from *impact metrics*, which assess the educational and community returns (RoE and RoC) of an EdTech investment. This report focuses on the RoE and RoC, and their relationship to Return on Investment.

The term “investor” is approached broadly to encompass both early stage investors (angel investors), Corporate Investors, Private Equity Investors, Impact Investors (e.g., social impact funds focusing on EdTech) as well as Venture Capital (VCs) investors and Limited Partners (LP). All these different types of investors can play a role in driving impact in the EdTech space.

Note that within the venture capital (VC) sector, there are specialists and generalists. While specialists may possess in-depth knowledge of the necessary steps to be taken, generalists may lack this expertise, especially concerning impact in the EdTech sector. This report aims to provide suggestions relevant to both types of investors. However, implementing these suggestions may be more straightforward for VC investors specialising in education and EdTech investments.

In addition to investors like venture capitalists and impact funds, foundations and philanthropic funders also play a significant role in shaping the narrative concerning the development of EdTech tools. They achieve this through funding various challenges and competitions, as well as directly supporting EdTech companies and NGOs as grantees.

Current debates and critiques in EdTech investments

Williamson and Komljenovic (2023) contend that investors wield substantial influence over EdTech evidence, and their practices should be more scrutinised. Investors engage in political activities through reports, podcasts, promotional materials, and large events featuring influencers and politicians, all aimed at advancing a normative vision of education: “Edtech is a sector that has, over the past decade especially, been rapidly subjected to techno-financial forms of valuation and capitalisation based on investors’ expectations of future earnings. These techno-financial forms of valuation and capitalisation are visible in the discourses and operations of edtech investors.” (p.237, Williamson & Komljenovic, 2023). This critique underscores the need to uphold principles that prioritise the well-being of learners and the improvement of educational outcomes over purely economic interests.

HolonIQ projects that global spending on EdTech is to reach $404 billion by 2025, while Technavio forecasts a market growth of USD 112.39 billion during 2021-2025. Edtech investments witnessed a surge both before and during the pandemic, driven by the increased reliance on digital tools for learning both at home and school. However, post-pandemic, the sector experienced a downturn, often referred to as the "winter" period, marked by a global decline in EdTech investments and major lay-offs in several larger EdTech companies. According to the latest HolonIQ data, 2023 witnessed a significant transformation in the EdTech Unicorn landscape, reducing the number of EdTech companies (currently) valued at over $1 billion to 13. Within the past 12 months, 29 companies were removed from the list, with no new EdTech Unicorns entering or exiting the scene during the year. These changes are attributed to the constrained capital environment, regulatory influences (especially in China), and the correction of over-hyped and over-valued startups, particularly in India.

Increasingly, there has been an interest in funding impact-oriented EdTech, and the call for investors to “embed impact intentionality in the investment process” and pursue “a self-imposed reform initiated by investors” that “can benefit all stakeholders—most importantly, the learners” (Labun, 2023).

INVESTORS' STRATEGIC CONTRIBUTIONS TO ROE AND ROC IN EDTECH

Engagement with mentors and consultants

Investors often collaborate with consultants, mentors, and research partners to incorporate scientific insights into EdTech design. Some maintain formal mentor networks and expert rosters for their portfolio companies, while others leverage their extensive networks to source relevant expertise as needed. Consultancies also play a crucial role, as companies engage researchers to provide feedback on designs or synthesize relevant studies, a practice sometimes recommended by investors and funders.

Examples include the Advisory Board of GSV, which is listed on the VC's website with names of the members supporting GSV's portfolio companies, and includes a mixture of advisors with both industry and academic backgrounds: https://gsv.ventures/our-team/ or Brighteye VC's mentor network: https://www.brighteyevc.com/mentors-and-advisors.

Engagement with the scientific community

For many investors, forming strategic partnerships with scientific communities is crucial, and this collaboration can be facilitated through various channels such as accelerators, foundations, impact-oriented venture capitalists, academic collaborations, swift evaluation processes, and certification approaches. While investors seldom attend academic conferences, they frequently organize webinars and gatherings, inviting scholars and academics from their networks to participate.

Examples include EdTech Garage, which is a European startup network part-led by Brighteye VC in partnership with the University College London EdTech Labs. The network regularly organises get-togethers in European capitals, podcasts and curates the community through newsletters and social media presence: https://www.edtechgarage.org/

Engagement in thought leadership

Leading EdTech investors can play a crucial role in improving the impact of EdTech evidence by advocating for evidence-based practices. They can demand evidence of effectiveness and impact before investing in EdTech ventures, thereby filtering out solutions that lack a proven track record. Such thought leadership can be communicated through various channels, including the company's own publications (e.g. Ryan Craig, founder of Achieve, has a weekly Forbes column, where he writes about education and skills-based learning) or participation in panel debates, podcasts and EdTech shows as speakers or commentators (e.g. Amit Patel (MD and Partner at Owl Ventures) in popular podcasts, including Shaping The Future by Houghton Miffin Harcourt).

Engagement with metrics and measurement of impact

Many investors currently require impact metrics and measurements from their portfolio companies, often publishing the results in their annual reports. Although these metrics may differ among investors, the common goal is to emphasize measurable and quantifiable impact. To illustrate, Owl's portfolio performance is assessed using metrics related to scale, access, diversity, and outcomes. The outcomes are detailed through graphics and reported as measures of 'research & efficacy rigor.' Achieve Partners focus on efficiency (improvement in operations), efficacy (improvement in learners' outcomes), and equity (improvement in access and diversity), which is measured across a logic model consisting of inputs, outputs, outcomes, and impact, evaluated in monetary terms based on assumptions and research. Reach Capital's impact framework monitors progress on a three point scale along dimensions of Scale, Access, and Product Quality, which includes the research basis, user love, and measured outcomes. Additionally, GSV considers the following metrics for evaluation: Revenue Scale, Revenue Growth, Active Learner Reach, International Reach, Margin Profile.

The annual report is the visible product of a continuous impact work. As Malvika Bhagwat, Partner and Head of Outcomes at Owl Ventures put it:

> "At Owl, the Education Outcomes Report is only one step of a yearlong process where we work alongside portfolio companies to develop logic models, in-product KPIs, articulate their impact metrics, make introductions to research firms, review survey design methodology, to help building a year-long commitment to impact and efficacy. We also are probably the only fund that has someone full-time dedicated to outcomes measurement efforts. I personally believe that the work we do yearlong is what helps drive progress; the report is only a one-stop celebration of that progress."

Taken together, there is no doubt that through their vision and actions, EdTech investors shape the narrative around education. It follows that they have considerable impact on the direction of EdTech and to influence public perception and policy decisions about the broader educational landscape. However, investors are also key drivers of innovation and progress in EdTech evidence. This influence occurs before and after their investments in specific EdTech companies and through practical efforts to engage with research at various stages of a company's growth.

Jakub Labun, Associate at Achieve Partners, articulated it as follows:

> "Impact evaluation is a key part of Achieve's investment process. We believe that companies generating the biggest social value are also likely to generate an adequate investment return. To that end, we apply our impact framework during the investment evaluation process and establish what the value of our impact as an investor might be - we try to monetize its abstract "positive social externality value" for apple-to-apple comparisons across a variety of potential EdTech companies. We rely on external research to hypothesize its scope, and validate it once we become invested in a given company."

INVESTORS' SYSTEMATIC CONTRIBUTIONS TO ROE AND ROC IN EDTECH

Investors' systematic ways of supporting research are presented next, according to two main stages of their activities: before and following investment in an EdTech company. Attention is paid to practices that promote balanced educational impact in the EdTech ecosystem.

Stage 1: Before investing

1 Research plurality for a balanced portfolio

An optimal EdTech research evidence portfolio includes a mixture of generative and reactive research. Reactive research is focused on responding to children's current situations, measuring immediate learning benefits. On the other hand, generative research involves blue-sky thinking, exploring novel patterns and approaches to engagement and learning. Effective EdTech must strike a balance between solutions that meet children where they are and those that propel them toward their potential. In learning sciences, this equilibrium is described as stretching the child within their zone of proximal development and builds on the theory of Lev Vygotsky (1896–1934) and the socio-cultural learning paradigm.

In venture capital (VC) funding, this balance translates into supporting EdTech grounded in well-tested theories while simultaneously funding innovations like generative AI that explore new paradigms. This means that investors need to support technology development that not only pushes the boundaries of education but also impacts children's ongoing academic progress. The essential implication is that investors need to support the latest innovations in EdTech that generate new knowledge while also ensuring these innovations align with established learning theories to ethically advance education, without disregarding valuable existing practices.

2 Three stages of learning

The literature, encompassing theories by Fitts, Anderson, Rasmussen, and VanLehn, establishes a consensus on the three-stage process of skill acquisition (see Proctor & Dutta, 1995). Fitts outlines cognitive, associative, and autonomous phases, while Anderson's theory includes declarative, transitional, and procedural stages. Rasmussen's framework distinguishes knowledge-based, rule-based, and skill-based performance. VanLehn further defines the stages as early, intermediate, and late phases in cognitive skill acquisition. These stages involve acquiring declarative and procedural knowledge, consolidating the acquired knowledge, and refining it through tuning (Kim et al., 2013).

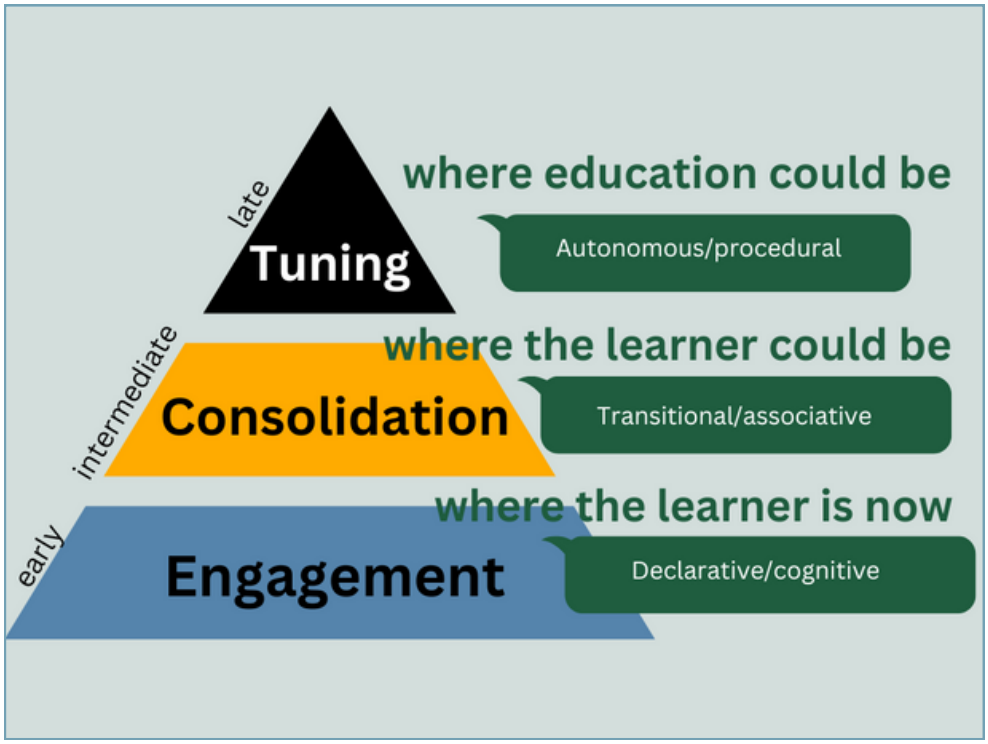
Ideally, all three stages in the learning process would be supported with evidence-based, impactful technologies to achieve solid learning outcomes. An example of where the balance across the learning stages and the spirit of evidence-based approach was achieved through strategic investment by several co-funders is the Tools Competition 2024 (https://tools-competition.org/). The competition included six tracks, which can be mapped on the three learning stages outlined here (see Table 1).

The six tracks of the Tools Competition 2024 with learning stages and examples

Learning stage	Example
Early	*Accelerating & Assessing Learning:* Tools to accelerate and assess PreK-12 learning outcomes and improve the learning experience. *Engaging Adult Learners in Higher Education:* Tools that increase the effectiveness and reach of higher education, particularly of non-traditional adult learners.
Intermediate	*Instructional Coaching for Early Childhood Education:* Tools that support instructional coaching for PreK to 2nd grade classrooms and expand teacher-centered principles in coaching practice. *Preparing for the 21st Century World:* Tools that increase the relevance of instruction to build 21st century skills and prepare students to navigate the changing world.
Late	*Building an Adaptive & Competitive Workforce:* Tools that support adult learners in developing critical skills necessary for the current and future national security workforce. *Facilitating Learning Science Research:* Tools and technologies that facilitate the learning science research process in order to expand the field's knowledge and improve learning interventions.

A simplified way of depicting the three learning stages is captured in Figure 1.

Figure 1: The three stages of learning (simplified)



Investors should be mindful of the various stages of learning backed by science, ensuring that EdTech solutions are both designed and invested in with consideration for these stages.

Considering the significance of all three learning stages in knowledge acquisition and expansion, and the evolving focus of learning platforms towards multiple objectives, it might also be possible to incorporate all three stages within individual products rather than limiting them to separate ones. Furthermore, categorizing technologies into the three learning types would enhance understanding of available resources and gaps, improving competitor analysis and elucidating the added value of new technologies to existing programs.

While expecting investors to prioritize a balance between the three learning stages may be unrealistic, achieving an overall balance in the EdTech investment ecosystem is crucial.

Significant efforts are already underway within the ecosystem to advance K-12 procurement and R&D, aiming to ensure evidence-based adoption of EdTech. Multiple organizations, such as through the AERDF councils (https://aerdf.org/), GETN (https://globaledtech.org/), and ICEIE (https://eduevidence.org/), are actively engaged in these ecosystem initiatives. Investors could play a meaningful role in this effort by strategically investing in EdTech companies that promote balanced learning outcomes and processes throughout K-12 education.

3. The scientific foundation of an EdTech solution

While investors commonly seek to understand competitor analysis, they also need to question, verify, and demand the scientific rationale for an approach adopted by a company claiming to be educational and aiming to have a positive impact on learners. Before supporting the EdTech's development through investments, VCs should therefore take steps to understand if the proposed solution is grounded in scientific principles, if research studies informed its development and whether the team is suitably placed to act on said evidence.

One important step involves integrating efficacy research at the initial stage of idea generation for investment. While many investors rely on media sources like articles and trend reports for generating ideas, few utilize educational research databases such as ERIC. Incorporating these resources could enhance their engagement and lead to more informed investment theses. Hence, understanding the scientific and innovation potential of an EdTech solution involves both accurately evaluating opportunities and effectively searching for them.

The most effective way to validate a company's scientific proposition is through an assessment of its theory of change. A theory of change serves as a tool to comprehend the factors contributing to successful implementation, gaining user buy-in, fostering user engagement, and ultimately achieving outcomes and impact. A research-based theory of change should articulate published studies supporting the company's approach, directly aligning with the key features of its product.

Unlike business metrics such as increased user numbers or higher return on investment, a research-based theory of change focuses on how inputs and activities contribute to enhanced learning and social impact. The assumptions underpinning the flow of effects from inputs to outcomes should be grounded in peer-reviewed literature. Such a theory of change is a critical tool for both investors and researchers because, without a mapped-out flow of effects, the tool cannot demonstrate impact based on research. For investors, the success of a business depends on the product delivering as promised.

Many research organisations, impact-oriented founders and foundations include the requirement of a research-based theory of change as part of their audits when considering a company for testing in schools. It could, therefore, also become a necessary component of due diligence for investors too.

Rhys Spence, Head of Research at Brighteye Ventures, comments on the importance of a pragmatic approach, for the benefit of founders, investors and users:

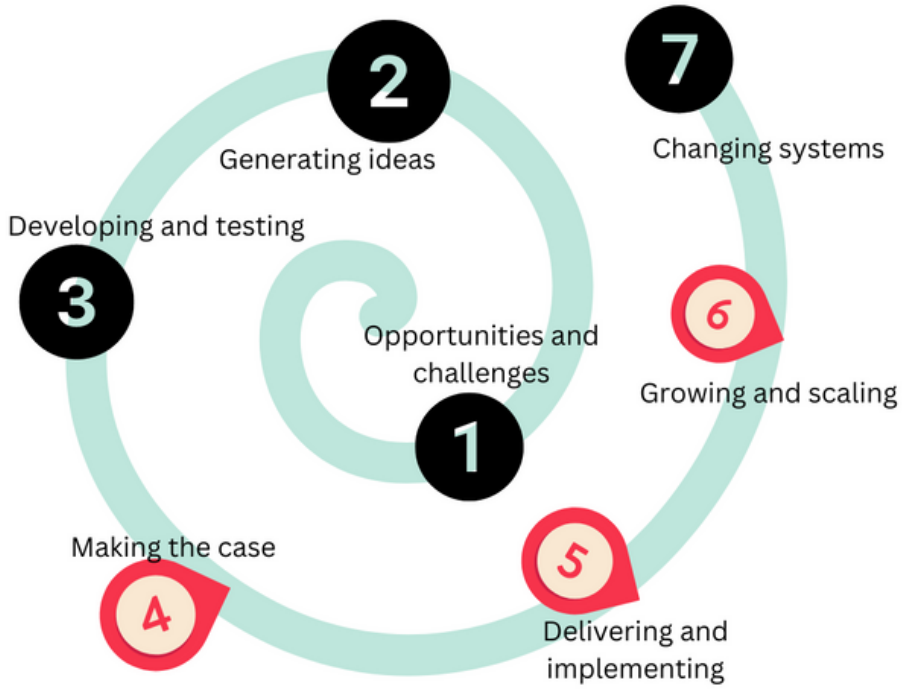
"Investors have a range of priorities when meeting founders regarding a possible investment – demonstrating speed, decisiveness, enthusiasm, building conviction and of course, considering impact implications. Complexity arises when specialist Edtech, and/or impact investors are rivalling generalist investors to win a deal. How can we best maintain momentum with a deal and balance a proportionate approach to impact? It seems unrealistic to expect a company to need to report to a different impact requirement for each possible investor during what is an already intensive process...

Perhaps the answer is improved standardisation of impact assessment across the investment community which companies could look to have in place as part of their preparation for the investment process... This is easier said than done, particularly when some funds opt to differentiate on impact support, but a published, minimum standard included within pitches could be workable. At Brighteye, our fundamental outlook is that impact metrics tend to be central to a successful Edtech company's value proposition – it should be something they use to market to their users because of how much it improves their learning experience and/or outcomes. When this is the case, their commercial direction and impact direction are clearly rowing in the same direction. In these cases, we try to keep a light approach to assessing impact prior to investment, instead encouraging development of a more robust approach once they join the portfolio."

4. Innovation versus scale

In conventional EdTech discourse, the emphasis often leans towards juxtaposing impact with scale. However, unlike the assumption in broader technology innovation, scaling in EdTech is not universal, as the intricacies and effectiveness of innovations may vary significantly from one educational context to another. As a human-centred endeavour, the implementation of EdTech is often "messy", given that education systems are inherently human, complex, and political. Green and Ziegler (2023) describe this as the "messy middle" of an implementation, nested within the innovation spiral that proceeds from trialling through implementing to institutionalisation and systems change (in Figure 2, the stages 4, 5 and 6 correspond to the "messy" implementation stage, as adopted from Green and Ziegler (2023).

Figure 3: The Nesta innovation spiral adapted by HundrED to depict the messy implementation stage of educational innovation (4-6)



In WiKIT's analysis of "The scientific and innovation gradient in an EdTech product", the innovation potential is assessed through a competitor analysis of similar products, which is similar to traditional competitor analysis, but in this case, the analysis focuses on the solution's addressing of research and learning gaps. The scientific potential is assessed through an integrative review, which specifies the rigour and novelty of an EdTech product to the current educational landscape. The assessment process includes identifying studies that endorse a solution's approach but also those that contradict it, considering the weight of each study (e.g., a master's study carries less weight than a meta-analysis focusing on the same assumption). The evaluation yields a score, consolidated between raters on a scale of 0-4 falling into four quadrants. The companies with highest scores fall into quadrant nr. 4, in that they have the highest scientific and innovation potential. Such companies are most likely to successfully navigate through the tumultuous middle phase and succeed at reaching stage 7 of changing systems.

Figure 3: WiKIT's examination of the scientific and innovation gradient of EdTechs

Finally, it is worth noting that in addition to examining the scientific and innovation potential of an EdTech, funders consider the culture of a company when making investment decisions. Here, different investors use different approaches, some preferring transparency while others maintain proprietary assessment methods. GSV investor, for instance, openly employs the '5Ps' framework (People, Product, Potential, Predictability, and Purpose), which tap into an important aspect of the company's culture, that can indicate their orientation towards evidence long-term.

Stage II: After investment is made

This section focuses on best practice for developing new research-based tech interventions.

1: Research-based design, implementation and validation of the technology

The research-based design, implementation, and validation of technology can be categorized into four stages, aligned with the maturity of the product. These stages mirror the process of designing an intervention, wherein researchers progress through stages from testing the basic features of the approach, in this case, the product, ensuring its impact in the intended context. Each stage relates to empirical research, that is research that systematic investigates and gathers data about the effectiveness, impact, and outcomes of the use of an EdTech solution. Unlike conceptual research, which is involved in a theory of change modelling, empirical research is concerned with direct observation or experimentation of an EdTech. Roughly speaking, empirical research that establishes whether an EdTech solution works, can be divided into four stages.

Stage 1:

At the first stage, typically a series of A/B testing studies and qualitative evaluations involving UX and LXD designers are conducted to inform the technology's design. Feasibility and usability studies, together with feedback from educators and users, fall into this first stage.

Stage 2:

Once a working, or feasible solution (an EdTech product) is in place, studies are conducted to assess the relationship between the product's usage and key variables it aims to impact, such as user attitudes and overall outcomes like engagement and learning outcomes. Once statistically significant relationships are established, the solution becomes research-recommended to be scaled to various contexts.

Stage 3:

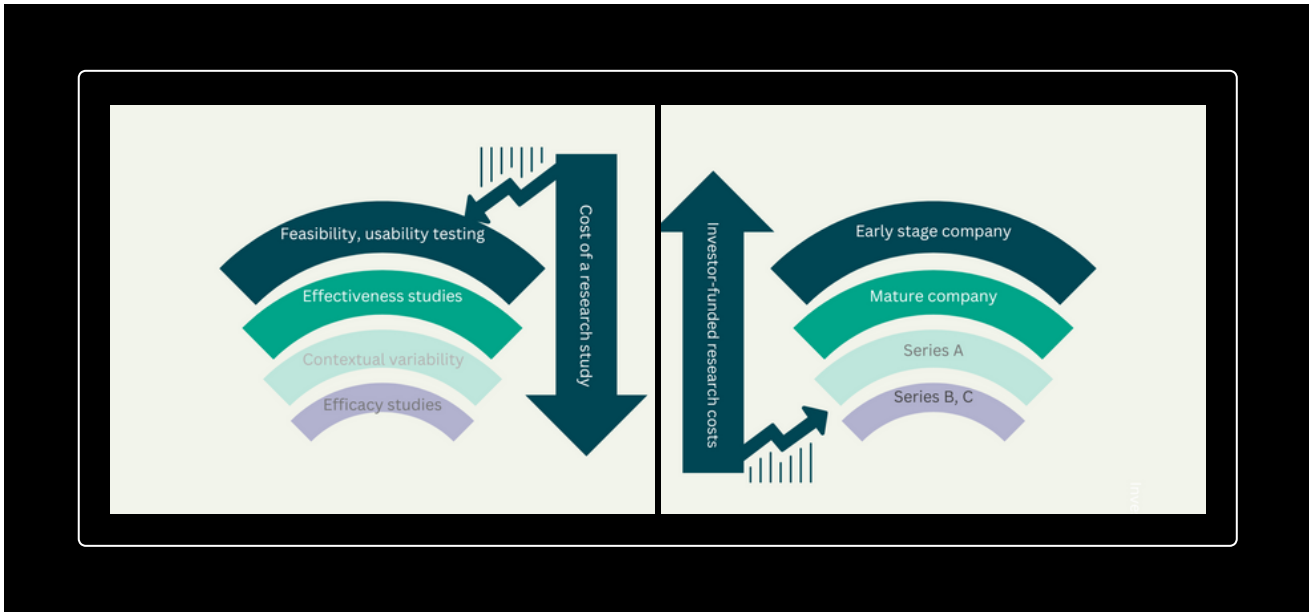
Each new context introduces unique variables and thus a cycle of evaluation to understand how specific factors influence the use of the solution. This contextual understanding is crucial, especially if the solution was initially developed and tested only in controlled environments rather than real classrooms, or if it was developed and tested in one context and is to be scaled to another context.

Stage 4:

Once contextual variability is established, the solution can be scaled to more users, enabling more possibility for the EdTech's approach to "control" the variability and thus providing opportunity for larger-scale experiments or long-term user tracking. The fourth, validation stage, is thus the most robust stage to determine whether an EdTech solution works.

Empirical testing may not always follow these four steps in a linear fashion, but due to the research costs and resources required for scientific rigor, it typically adheres to this general sequence. While some international evaluation frameworks, such as the US-originated ESSAR framework, categorize these stages hierarchically into four steps, others emphasize the importance of the four stages rather than their specific sequence. Given that the deployment of scientific methods requires a certain maturity of the product (or approach) to be tested, the four stages can be mapped on the four stages of investment in an EdTech. Figure 3 captures this mapping.

Figure 3. The four stages of research and maturity of an EdTech solution



While this would require a significant change in the level of direction offered from VCs currently, investors interested in impact can advocate for research funding in their portfolio companies by suggesting that the companies integrate research into their budgets and consistently allocate funds for planned research expenditures. Providing research budgets, subsidies, or direct funding for studies is crucial, particularly in the early stages of a company's growth when cash is limited. Research is often deprioritized during this period, but it is essential for establishing a solid impact foundation. Figure 3 illustrates the recommended allocation of funds, with the highest emphasis on research at the early stages and decreasing as the company matures. By the mature stage, companies should have internal research resources and stable budget allocations for research, reducing dependence on external funding.

To facilitate empirical testing of a solution with users, companies must adhere to ethical standards and established scientific research procedures when recruiting participants. Typically, companies collaborate with a research partner, and investors can support this collaboration by providing subsidies or full funding for the research work. Examples of research partners in USA include LeanLab, LearnPlatform, Mathematica, LXD Research, Consult4ED or WestED, each offering their own package of ESSA-aligned studies. Ideally, companies would develop research capacity internally or in collaboration with academic institutions to conduct these studies.

2: Ongoing evaluation of impact and engagement with research

Investors can further bolster companies' ongoing engagement with research, facilitating not only the evaluation and scaling of their current initiatives but also exploring future possibilities. This involves connecting them with experts who can offer advice, support, and the latest scientific insights as potential considerations. A robust network of learning scientists, psychologists, educational researchers, and experts across various educational domains is essential for this endeavour, ensuring that academic knowledge can be effectively translated into industry solutions to enhance scholarly impact. WiKIT initiated such a model with a "Scientist on Demand" program in collaboration with Owl and Brighteye VC in early 2024, subsidized by the Jacobs Foundation.

A company's ongoing engagement with research can be facilitated through various nudging and reflection techniques. WiKIT has developed a unique approach to support this process, focusing not on auditing or evaluating "the" scientific mindset but rather on fostering founders' ongoing critical thinking and curiosity through a set of question prompts. Known as the Evidence Mindset cards, these tools facilitate reflection and ongoing discussions within EdTech organizations and with researchers, thereby enhancing their capacity and comprehension of evidence, research, and impact. The ultimate goal is to integrate these principles into the company's core values, making them intrinsic to its operations rather than outsourced commodities. The questions were designed to support the company's commitment and capability to take its impact responsibilities seriously. Examples of questions include:

1. **How will we gather and utilize data to continuously refine our understanding of how our solution delivers intended outcomes?**
2. **What strategies will we employ to engage educators, students, and other stakeholders in the process of developing and validating our solution?**
3. **How are we leveraging multi-stakeholder engagements to bolster community engagement and foster long-term collaborations?**
4. **How are we leveraging our resources and influence to support both immediate and long-term solutions to social and environmental injustices, especially for communities most affected by adversity and climate change?**
5. **In what ways do we convert research challenges and unexpected findings into opportunities for learning, refinement and growth?**

3: Selecting and consolidating impact metrics

While there may be some common understanding of how impact is conceptualised and systematically tracked through stages, the specific impact metrics measured over time in a company's growth need to be tailored to each individual company. In certain areas, the measurement tools of impact can be standardised based on established outcome measures calibrated for a particular population. Such cases are similar to the standardised measurement instruments used in research studies, where outcome measurements rely on measures standardized across broader populations, enabling generalised statements. However, this is not always feasible, as the specificity of a given EdTech necessitates specific outcomes and measurement tools directly developed for that particular solution.

As a result, investors' impact assessment typically involves a selection of hand-picked metrics that hinder the evaluation of portfolio-level impact. This complexity complicates investors' comprehension of the scope of their investment's influence, the relative performance of different investments, and ultimately, the overall impact of their portfolio. And yet, understanding the impact of an investor's portfolio is vital given the uncertainty inherent in EdTech investments.

Therefore, the specificity of impact metrics in EdTech presents a challenge that can only be addressed through increased impact work within the ecosystem over time. This will allow for the combination, standardization, and consolidation of metrics.

4: Auditing and evaluating the impact of a research company

Researchers and learning scientists often serve as third-party evaluators and auditors of a company's evidence-based practices. In these instances, researchers are hired by the investors to assess the rigor of a company's evaluation process, validate its impact metrics against established standards, and provide independent evaluations of conducted studies. Investors seeking input from independent researchers for such auditing is crucial, especially for companies that conduct studies internally and publish them without a peer-reviewed feedback loop in place.

When performing evaluations or validating a company's research base, the hired evaluators should consider multiple evaluation frameworks rather than rigidly applying one to a specific study conducted by a company. A balanced view of the impact should be provided, taking into account the specific operational context. For instance, if a randomized controlled trial (RCT) was conducted in a region with a history of poor implementation or limited adherence to intervention protocols, this must be considered. Additionally, the randomization of schools or students and the use of standardized assessments differ significantly between Anglo-American contexts and other countries. Evaluations in the Global South should be conducted with attention to local researchers' capacity (Kucirkova, 2023) and existing evidence, rather than relying solely on frameworks developed for the Global North.

Conclusion

In conclusion, given the current limited impact of EdTech (UNESCO GEM Report, 2023), the imperative for evidence-based practices in EdTech investment cannot be overstated. Investors play a pivotal role in shaping the EdTech landscape by demanding concrete evidence of impact. By championing long-term learning and social impact, investors can foster sustained positive outcomes in education. In addition, strategic investments in scaling up evidence-based EdTech solutions not only eliminate low-quality alternatives but also propel the field forward.

Kristyn Manoukian, the Tools Competition Program Director, put it as follows:

"Learning is a continuous journey and the Tools Competition is designed to support the development of EdTech tools that recognize each stage of the learning process. This includes impacting the approach and outcomes for daily learners as well as shifting the larger learning spectrum to encompass new technologies, insights, and measurements that expand what's possible systemically. Our goal is to help improve the quality of learning for everyone. We are fortunate to have supporters that recognize and embrace our ability to merge evidence-based ed tech development with aspirational innovation. Because of this, the whole learning community benefits from a more nuanced and practical form of investment that can create long-term, highly-innovative impact that challenges what is possible in learning. EdTech investment that embraces this approach is essential to catalyzing improved outcomes."

Supporting collaborative models that engage researchers and EdTech founders to work together, enhances both the EdTech industry and the research field. It is through these diverse and coherent efforts that investors hold the potential to drive significant progress and innovation in EdTech, fostering a transformative and positive impact on the learning landscape.

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