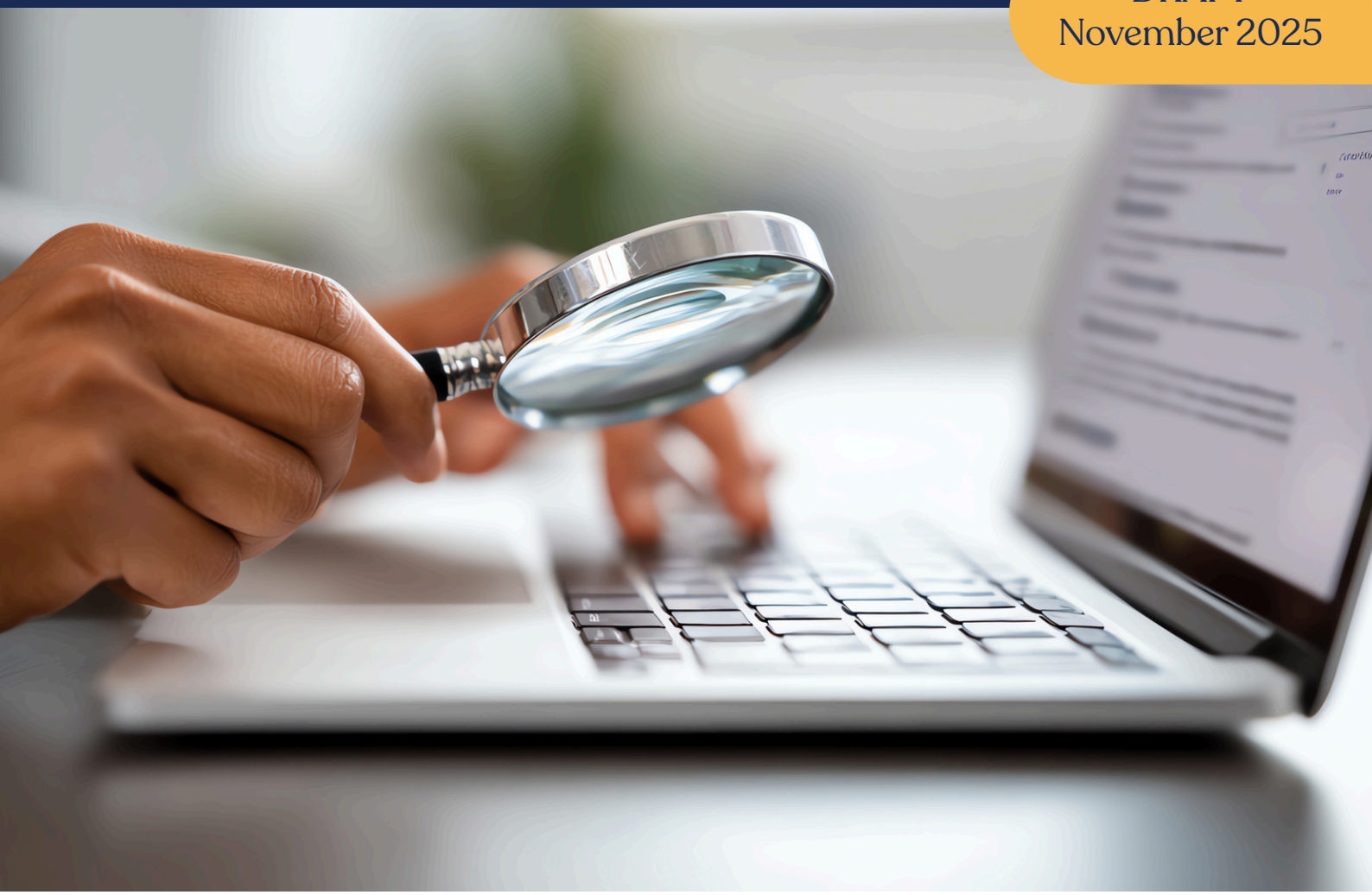
EdTech
Evidence Board

EdTech Evidence Glossary

Identifying evidence that enables EdTech organisations to better understand the efficacy of their EdTech products

DRAFT
November 2025



Chartered College of Teaching

Department for Education

Introduction

This booklet has been published by the Chartered College of Teaching as part of the EdTech Evidence Board Project, funded by the Department for Education.

In producing this glossary, we have aimed to provide an overview of some of the different types of evidence that EdTech organisations might utilise to demonstrate the efficacy of their EdTech products for teaching and learning.

- Section 1 provides an overview of different evidence types and what they might be used for.
- Section 2 provides a glossary definition for each of the terms used in the first section.
- Section 3 provides additional glossary definitions of other key terms that you may encounter as part of research and evidence engagement.

We recognise that this will not necessarily be an exhaustive list of all of the potential evidence sources available to you; instead, we offer suggestions of commonly used evidence sources that you might consider when looking to build evidence for your EdTech product(s).

The EdTech Evidence Board is committed to supporting EdTech organisations to utilise evidence to better understand the efficacy of their EdTech products. This is a working document and will be updated from time to time; if you have any feedback or suggestions as to how this booklet could be improved, please do let us know.

Katy Chedzey
Associate Director, Chartered College of Teaching
Contact us: EdTech@chartered.college

About the EdTech Evidence Board

The EdTech Evidence Board will take an evidence-based approach to evaluating the effectiveness and impact of EdTech products. The board will review evidence submitted by EdTech organisations using a defined set of criteria. These criteria have been informed by research evidence and developed in consultation with subject matter experts, EdTech organisations, and educators representing schools and colleges from across the country.

We believe that the EdTech Evidence Board will have a positive impact on the sector by driving critical thinking among schools and EdTech providers about the impact and measurement of EdTech products, helping education settings feel confident that they are choosing products that work well for them and for their classrooms.

In 2025-2026 we will be piloting the EdTech Evidence Board approach with a selection of EdTech products submitting evidence portfolios for review. As part of the pilot, we'll also be developing tools, guidance and resources that will be made available to EdTech companies free of charge to support evidence-gathering for their products.

You can find out more about the project, and register for updates via our website: https://chartered.college/edtech-evidence-board-project/

Visit our website to find out more

1. Types of evidence

There is no single ideal type of evidence for demonstrating the efficacy of EdTech products. Rather, the best type of evidence will depend on what it is you are seeking to understand.

In terms of efficacy for teaching and learning, what many people tend to want to know is: does the product actually do what it sets out to do? We might call this **actual efficacy**. Being able to measure 'actual' efficacy may be ideal, but can often be challenging, particularly when it comes to determining a **causal effect** in real world education settings - because, as we know, education settings are complex environments, and there are often many factors and variables that can make a difference to the experiences and outcomes of teachers and their students.

The EdTech Evidence Board therefore recognises that we may need to look at how we evidence efficacy in a multitude of ways; not just the 'actual' efficacy of a product, but also the **conceptual efficacy** of a product (in theory, could it work?) and **practical efficacy** of a product (is there evidence that tells us that a product is able to be used in a way that means it has the potential to produce it's intended effects in the right conditions, or if implemented in a particular way?).

We therefore encourage EdTech organisations to gather a portfolio of evidence that helps to demonstrate the efficacy of their products in different ways. In this section we introduce three different categories of evidence: Theoretical evidence; experiential evidence; and empirical evidence. For each category, we suggest a range of different types of evidence which fit within the category that you might consider utilising. You will notice that some evidence types may be listed in more than one category.

You can find a glossary definition for each of the evidence types listed in section 2 of this booklet.

Theoretical evidence

This category of evidence helps to explain how or why a product might work.

Evidence that falls within this category could include:

- Logic model
- Theory of change
- Expert review
- Market research
- Review of literature (e.g. rapid evidence review, systematic review, scoping review, meta-analysis)
- User testing e.g. evidence gathered via sandboxes, testbeds, test and learn
- Feasibility studies

Theoretical evidence can help to demonstrate the **conceptual efficacy** of an EdTech product. i.e. in theory, could the product achieve is intended effects?

Experiential evidence

This category of evidence helps to give an insight into individuals' experiences of a product that can help to understand and shape its use.

Evidence that falls within this category could include:

- User testing e.g. evidence gathered via sandboxes, testbeds, test and learn
- Pilot evaluation
- Expert review
- Case studies
- Surveys
- Interviews
- Focus groups
- Observation
- Practitioner research / action research
- Analysis of secondary data e.g. usage data/analytics
- Longitudinal studies
- Mixed methods research

Experiential evidence can help to demonstrate the **practical efficacy** of an EdTech product. i.e. is it able to be used in a way that has the *potential* to produce its intended effects?

Empirical evidence

This category of evidence attempts to observe and measure actual effects (e.g. to demonstrate a cause and effect relationship between a product and its intended outcomes).

Evidence that falls within this category could include:

- User testing e.g. evidence gathered via sandboxes, testbeds, test and learn
- Observation
- Pilot evaluation
- Practitioner research / action research
- Non-experimental studies
- Longitudinal studies
- Analysis of artefacts e.g. student work, teaching materials
- Efficacy trials e.g. Quasi-experimental studies, Randomised control trials
- Analysis of secondary data e.g. attainment data, test scores, product analytics
- Mixed methods research

Empirical evidence can help to demonstrate the **practical efficacy** or the **actual efficacy** of an EdTech product. i.e. is it able to be used in a way that has the *potential* to produce its intended effects and/or does it actually produce its intended effects?

2. Glossary of evidence types

The definitions below provide a brief explanation of what each type of evidence is. Next to each evidence type you will see an icon that indicates which of the three categories it fits into:

T Theoretical evidence Ex Experiential evidence Em Empirical evidence

Analysis of Secondary Data	Analysing data that already exists and which may have been gathered for other purposes. Commonly used secondary data includes usage data, product analytics, attainment data and test scores. Ex Em
Analysis of Artefacts	Examination of materials or outputs created during learning or teaching (e.g. student work, lesson plans, teaching resources, or assessment tasks). Used to understand learning processes, instructional quality, or evidence of impact through tangible artefacts. Ex
Case Studies	An in-depth, qualitative exploration of a single instance (e.g., a school, class, teacher, or intervention). Provides rich contextual detail and insight into how and why something works (or does not). Em
Efficacy Trials	Evaluation of an intervention under ideal or developer-led conditions. Uses randomised or quasi-experimental methods to test whether the intervention can work in a controlled setting. Ex
Expert Reviews	Structured appraisal or critique conducted by individuals with relevant expertise (e.g. academics, teachers, or sector specialists). Provides an informed, independent judgement on quality, validity, or alignment to research and practice. Em
Feasibility Studies	A small-scale investigation carried out before a full evaluation to assess the practicality, acceptability, and potential effectiveness of an intervention. Explores whether an approach can be implemented as intended and what adaptations may be required. T

Focus Groups	A form of qualitative research involving guided discussions with small groups of participants to explore perceptions, experiences, and attitudes about an intervention or issue. Em
Interviews	One-to-one or small-group conversations designed to gather detailed qualitative insights from participants such as teachers or learners. Interviews are used to explore participants' experiences, perceptions, and explanations of how and why an intervention works (or doesn't). Em
Longitudinal Studies	Research that follows the same individuals, groups, or schools over time to track changes, trends, or long-term effects of an intervention. Ex Em
Logic Model	A structured or visual representation of what an intervention does and what it aims to achieve, showing the logical flow from inputs and activities to outputs, outcomes, and impacts. T
Market Research	Systematic collection and analysis of data to understand user demand, needs, and perceptions of a product. Often includes surveys, interviews, or focus groups with educators, learners, or institutions to test market fit and relevance. T
Mixed Methods Research	Research that combines quantitative and qualitative data collection and analysis to provide a more comprehensive understanding of an intervention's effects and mechanisms. Strengthens validity through triangulation across multiple data types. Ex Em
Non-experimental Studies	Evaluation of an intervention without the use of random assignment or control groups. It relies on observing and measuring variables as they naturally occur, without controlling the conditions. Ex
Observation	Systematic watching and recording of behaviours, practices, or classroom interactions, usually as part of qualitative or mixed-methods evaluation. May be structured (using a protocol) or unstructured. T

Pilot Evaluations	A small-scale, preliminary evaluation of a programme or intervention, used to test feasibility, design, and potential impact before committing to a larger trial. Ex Em
Practitioner Research	Research led (or co-led) by educators or practitioners within their own settings to investigate, test, or improve practice. It often combines inquiry with action to generate locally relevant evidence. Ex Em
Review of Literature	A summary and critical discussion of existing published research relevant to a topic. May vary in rigour, from narrative reviews to more structured scoping, systematic or meta-analysis reviews. T
Surveys	Self-reported data from individuals (e.g., students, teachers, parents) using questionnaires. Useful for capturing attitudes, experiences, and self-perceptions at scale. Ex Em
Theory of Change	A narrative and conceptual explanation of why and how an intervention is expected to lead to its desired outcomes. It sets out the assumptions, mechanisms of change, and contextual factors that underpin the approach, helping identify what kinds of evidence are needed to test the causal logic. Ex Em

3. Glossary of other key terms

In this section you will find explanations of additional key terms that may be useful to be aware of when engaging in evidence-gathering for EdTech products.

Attainment data / attainment measures
Quantitative indicators of student achievement, typically gathered through assessments such as test scores, exam grades, or curriculum-based performance measures. Attainment measures may sometimes be used as outcome data in evaluations.

Bias
Systematic influences that can affect how evidence is generated, analysed, or interpreted, leading to distorted or unbalanced findings. Common examples include selection bias, confirmation bias and response bias.

Control Group
A group of participants who do not receive the intervention, used to estimate the counterfactual (what would have happened otherwise). In matched studies, comparison groups are constructed using statistical or demographic matching to approximate similarity.

Effectiveness Trial / Process Evaluation
Tests whether an intervention works under real-world conditions at scale. Often includes a Process Evaluation, which studies how and why an intervention is (or is not) effective, exploring implementation quality, fidelity, and contextual factors.

Meta Analysis
A statistical technique that combines the results of multiple studies addressing the same question, producing an overall estimate of effect size and identifying patterns across contexts.

Qualitative Data
Non-numerical data that explores experiences, perceptions and explanations. Is typically collected through methods such as interviews, focus groups, observations, open-ended survey responses, or analysis of artefacts.

Quantitative Data
Numerical data that can be measured, counted, or statistically analysed. Is particularly useful for identifying patters, comparing groups, tracking change over time and exploring the extent or magnitude of outcomes associated with a product.

Randomised Control Trial
A type of efficacy study. A Randomised Control Trial (RCT) uses an experimental study design where participants are randomly assigned to either the intervention or control group. Considered the most robust method for establishing causal impact.

Reliability
The extent to which evidence or a measurement tool produces consistent results when used repeatedly or by different people, under similar conditions.

Scoping Review
A type of literature review that maps the existing research on a topic, identifying the scope, key concepts, sources, and gaps, but not necessarily assessing study quality.

Systematic Review
A rigorous review of research evidence using transparent and replicable methods to identify, appraise, and synthesise all relevant studies addressing a specific question. Often includes meta-analysis.

Test Scores
Standardised, curriculum-based or in-built assessments providing quantitative measures of student performance. Frequently used as outcome measures in education evaluation.

Usage Data
Quantitative data collected directly from the product itself, such as log-ins, time spent, feature usage, completion rates, engagement patterns, and clickstream data. This can provide insights into actual usage, fidelity of implementation, learner engagement, and sometimes proxy indicators of learning.

Validity
Validity means that we can trust that evidence is accurate. i.e. that any methods, instruments or measures used actually measure what they set out to, and that findings provide an accurate picture of what is actually happening.

This is not an exhaustive list. We will continue to add to and develop this glossary throughout this pilot phase.

EdTech
Evidence Board

Chartered College of Teaching | The Professional Body for Teachers

edtech@chartered.college | 020 3433 7624