

Your Role in The Evidence-Building Ecosystem at ED

FEBRUARY 12, 2025

Agenda



- What's Evidence?
- The Evolution of Evidence-Building At ED
- Measures Matter
- Methods Matter
- Mobilization Matters
- Q&A



What's Evidence?

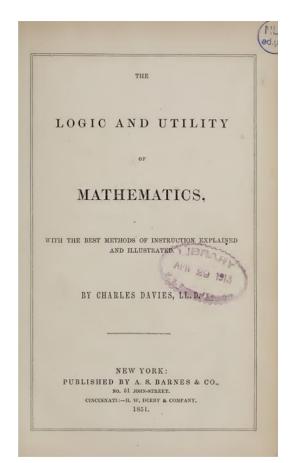
We're Part of a Robust Tradition



Scholarship on curriculum, instruction, and other education topics spans hundreds of years.

The earliest record in ERIC is Davies (1851).

Check it out at https://eric.ed.gov/?id=ED620491



Fast Forward to 2001



• In 2001, Congress passed No Child Left Behind, reauthorizing the Elementary and Secondary Education Act of 1965.

 Among its many tenets was the idea of scientifically based research, and the role of research in school improvement.

 Congress had strong ideas about what constituted scientifically based research!

NCLB §9101



- Systematic
- **Empirical**
- Rigorous
- Hypotheses
- Reliable
- Valid
- Experimental
- Quasiexperimental
- Peer Reviewed

"(37) SCIENTIFICALLY BASED RESEARCH.—The term 'scientifically based research'—

"(A) means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs; and

"(B) includes research that-

"(i) employs systematic, empirical methods that draw on observation or experiment:

"(ii) involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

"(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the

same or different investigators;

"(iv) is evaluated using experimental or quasiexperimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;

"(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to

build systematically on their findings; and

"(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.

2015 (And Today)



- The Every Student Succeeds Act of 2015 replaced NCLB, and shifted the conversation from "scientifically based research" to "evidence based."
- The definition broadened the range of education research that could be considered "evidence," but made clearer distinctions between types of evidence.
- The Education Department General Administrative Regulations, EDGAR, added further specificity.

Evidence Tiers

| | ESSA Definition | Tier | EDGAR Elements |
|---|--|---|---|
| 1 | at least 1 well-designed and well-implemented experimental study | Tier I Strong Evidence | Evidence at or above the tier that meets WWC standards Overlapping sample Relevant finding 2 or more sites 350 or more students |
| | at least 1 well-designed and well-implemented quasi-experimental study | Tier II Moderate Evidence | |
| | at least 1 well-designed and well-implemented correlational study with statistical controls for selection bias | Tier III Promising Evidence | Relevant finding from a Tier I or Tier II study that doesn't meet the overlapping sample, multi- site, or large sample requirements or A study that meets the ESSA Tier III definition |
| | based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes | Tier IV Evidence that Demonstrates a Rationale | a key project component included in the project's logic model is informed by research or evaluation findings that suggest the project component is likely to improve |

relevant outcomes.





The Evolution of Evidence-Building at ED

IES Theory of Action



Independent Peer Review

Describing Conditions in Ed NCES, NC(S)ER, NCEE

Development and Innovation NC(S)ER Early Efficacy Testing NC(S)ER Replication &
Effectiveness
Evaluation
NC(S)ER & NCEE

Synthesis* and Mobilization (NCEE)

Regional Educational Labs

R&D Centers and Networks

* NCEE has formal structures for Synthesis (e.g., WWC) although some NC(S)ER projects, both regular grants and R&D centers and networks, may also include this type of work.

WWC

ERIC

Increasingly, Evidence Building at ED Is a Team Sport



 As part of the American Reinvestment and Recovery Act, the Department launched the Investing in Innovation (i3) grant program ... which we now know as EIR!

 Other grant programs beyond EIR began to add the requirement that grantees use evidence in project design and build strong or moderate evidence of their project's effectiveness.

A Growing Cadre of Evidence-Building Partners



Describing
Conditions on the
Ground
NCES

Development and Innovation NC(S)ER

Early Efficacy
Testing
NC(S)ER

Replication & Effectiveness Evaluation NC(S)ER & NCEE

Synthesis* and Mobilization (NCEE)

Education Innovation and Research

Supporting Effective Educator Development

and other programs at ED

ED's goal is to drive research on education interventions "up and to the right" in this diagram.

EIR grants, as well as other grants within the ED portfolio, play a complementary role to the work of IES' Centers.

Among other things, that means we want to ensure that your work gets the benefits of, is integrated with, and fulfills the responsibilities of the larger ED ecosystem. Efficacy Trials
IES Initial Efficacy
Grants
EIR Mid-Phase

Effectiveness Trials
IES Replication
Grants
IES Effectiveness
Evaluations
EIR Expansion
Grants

Hypothesis Generation IES Exploration Grants

Increasing Rigor

<u>Innovation</u> <u>IES Development Grants</u> <u>EIR Early-Phase</u>



Increasing Scale



Evidence Pathways

Sustained Evidence Building: Fraction Face-Off



2010

- <u>National Research and Development Center on Improving Mathematics Instruction</u> for Students with Mathematics Difficulties
- Examined initial effects of *Fraction FaceOff*

2021

- Mid-phase EIR-funded project
- Scalability, Capacity, and Learning Engagement (SCALE) for Fraction Face-Off to Accelerate Mathematics Learning of Students Experiencing Mathematics Difficulty

2024

- Expansion EIR-funded project
- Scalability, Capacity, and Learning Engagement for Underserved Populations (SCALE UP) for Fraction Face-Off

Sustained Evidence Building: Early College Networks



2006 -2023 • IES initial efficacy studies and follow up studies of the Early College High School Model as implemented in North Carolina since 2006.

2016

• IES study evaluating the routine implementation of ECHS across 5 states.

2019

- EIR Mid-Phase
- Rural Early College Network

2024

- EIR Mid-Phase Grant to replicate AIR findings
- Rural Early College Network 2.0



To Build Pathways, We Must Share What We are Learning

Public Access



 The Department's new plan is available on the IES Public Access page - https://ies.ed.gov/funding/researchaccess.asp

 EDGAR now also includes a regulatory section on 75.623 titled *Public availability of grant-supported research* publications - https://www.ecfr.gov/current/title-34/section-75.623



You are a critical component of the nation's education evidence-building infrastructure. Thank you.