Accelerate

Accelerate 2024-2025 Community of Practice

Implementation

April 24, 2025

Welcome

Agenda

- **Welcome** | Jennifer Bronson, Accelerate
- **Cost Tool Deep Dive** | Dr. Matthew Steinberg, Accelerate
- **Breakout Discussions** | Accelerate Staff
- **Closing** | Colby King, Accelerate

Norms

Remain muted when not speaking

Keep your video on when possible

Avoid multitasking

Endorse, reiterate a viewpoint in the chat.

Use the hand raise function

Complete the Zoom poll

Presentation | *Conducting Cost Analysis of Tutoring Interventions*

Introduction

Dr. Matthew Steinberg

Managing Director of Research and Evaluation, Accelerate

Overview of Presentation

- Introduction & Context
- Why cost analysis matters
  - Discussion: Availability/use of program cost data
- Ingredients Method & Cost Metrics
  - Discussion: Program ingredients
- Guided Practice
- Plans for the Future
- Q&A

Objectives

1. Describe the value of gathering data on program cost and cost-effectiveness

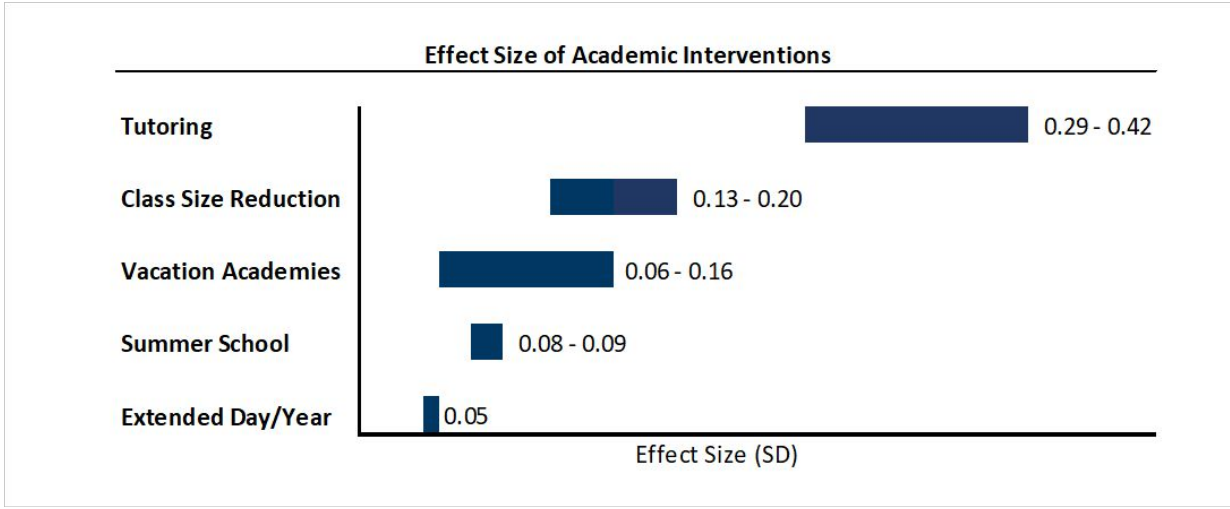
2. Share information on Accelerate's approach to conducting cost analysis of tutoring interventions

3. Practice key steps of conducting cost analysis

Tutoring Context

What We Already Know

Evidence increasingly confirms that, on average, high-dosage tutoring improves student achievement more than other educational interventions.



- Among large-scale RCTs (>350 students), impact of tutoring ~ 0.20 SD (Nickow et al., 2024; Kraft et al., 2024; Kohlmoos & Steinberg, 2024)

Current High-Dosage Tutoring Research Landscape

Data from the 89 RCTs included in Nickow et al. (2024) provides a representative snapshot of the HDT evidence landscape

- Majority ELA, reflecting both the provider landscape and available research
  - Of the 265 RCTs included in Kraft et al. (2024), 73% are literacy tutoring programs in elementary grades
- Relative lack of evidence on tutoring impact in Grades 6-11 (middle and high school students) and in math content area

ELA, Grades 2-5 1:1	Math, Grades 2-5 1:1	ELA, Grades PK-K 1:2	Math, Grades 2-5 1:2
ELA, Grade 1 1:1	Math, Grade 1 1:1	ELA, Grades 6-11 1:3+	Math, Grade 1 1:2
ELA, Grades PK-K 1:1	ELA, Grades 2-5 1:2	Math, Grades 2-5 1:3+	Math, Grades PK-K 1:3+
ELA, Grades 2-5 1:3+	ELA, Grade 1 1:2	Math, Grades 6-11 1:1	Math, PK-K 1:2
ELA, Grades 6-11 1:1	ELA, Grades PK-K 1:3+	Math, Grade 1 1:3+	Math, Grades 6-11 1:3+
ELA, Grade 1 1:3+	Math, Grades PK-K 1:1	ELA, Grades 6-11 1:2	Math, Grades 6-11 1:2

Why cost analysis matters

Why cost analysis matters

- Constrained fiscal climate
  - The end of ESSER funds and the rise of fiscal uncertainty
  - Increasingly states focusing on cost and effectiveness as part of policy and procurement decisions
- Program planning
  - Incorporating cost into program planning decisions
- Implementation barriers
  - Hidden costs that constrain implementation can limit program reach

Usually we ask...

Does it work?

And we answer it with...

Impact Evaluations

But in a world of constrained resources...

We need to ask...

Is it worth it?

And thus we also require...

Cost Analysis

Discussion: Availability/use of program cost data

1. In what ways have states or districts requested information on program cost? E.g., have states/districts requested cost analyses beyond the per pupil sticker price?

2. What are the costs borne by schools necessary to implement your program?

3. How does your organization incorporate cost into program planning and improvement efforts?

Ingredients Method & Cost Metrics

Conducting Cost Analysis of Tutoring Interventions

The Guide for Program Providers and Researchers and accompanying cost analysis tool provide a standardized approach to conduct rigorous cost analysis of educational programs and interventions.

Does it work? → Evidence of program impact from a well-designed evaluation (e.g., RCT)

Is it worth it?

What does it cost?*

Phase 1 — Implementation Details

Implementation setting characterized by:
(i) a clearly delineated number of schools using the same program model;
(ii) a specific count of students (across those schools) receiving services; and
(iii) a finite duration of the program (i.e., a specified timeframe for the provision of services).

Phase 2 — Identify and Define Ingredients

Collects the cost drivers (ingredients) required for program implementation into the following input categories:
(i) Personnel: Delivery and Operations;
(ii) Training and Support;
(iii) Equipment and Materials: Delivery and Operations;
(iv) Facilities: Delivery and Operations; and
(v) Other: Delivery and Operations.

Phase 3 — Price the Ingredients

Pricing the ingredients involves a five-step process:
(i) identify pricing category;
(ii) assign unit of measure;
(iii) quantify the ingredients;
(iv) assign price to the ingredient; and
(v) identify perspective, or who is paying for the ingredient.

Phase 4 — Creating and Using Cost Estimates

The final phase of the Ingredients Method is to create and apply the cost estimate. Accelerate's cost tool automatically calculates three types of summative outputs: Summary Costs; Cost Metrics; and Cost Planning Scenarios.

*Accelerate's Cost Tool uses the Ingredients Method, which involves three steps: (1) identifying program ingredients; (2) pricing the ingredients; and (3) calculating and applying the estimate of program cost (Levin, 2001).

Accelerate's Cost Tool follows the structure and process of the Ingredients Method by: identifying implementation details (Phase 1); defining program ingredients (i.e., inputs) (Phase 2); pricing ingredients (Phase 3); and creating and using the cost estimate (Phase 4).

METRICS

TUTORING EFFICIENCY

Number of hours of tutoring necessary to improve student learning by one month. Tutoring efficiency does not rely on program cost.

COST EFFICIENCY

Number of hours of a program (e.g., tutoring) a student receives per $1,000 per pupil. This measure compares the cost of programs that might, for example, vary by dosage. However, it does not consider program quality, because it only describes the hours of tutoring purchased per $1,000 per pupil, not the student learning impact of those tutoring hours.

$$\text{COST-EFFECTIVENESS} = \frac{\text{COST EFFICIENCY}}{\text{TUTORING EFFICIENCY}}$$

COST-EFFECTIVENESS

Calculated using tutoring efficiency and cost efficiency. Cost effectiveness is defined as the additional months of learning gained by investing $1,000 per pupil (or, the amount of student learning a school can purchase for $1,000 per pupil).

Does it work?: Tutoring Efficiency

Tutoring Efficiency: Hours of tutoring to improve student learning by one month

$$\text{Tutoring Efficiency} = \frac{\text{Hours of intended dosage}}{\text{\# of additional months of learning gained by tutoring}}$$

Is it worth it?: Cost Effectiveness

Cost Effectiveness: Number of additional months of learning gained by investing $1,000 per pupil

$$\text{Cost Effectiveness} = \frac{\text{Hours of tutoring for \$1,000 per pupil}}{\text{Tutoring Efficiency}}$$

Stylized Example: Illustrating Cost Effectiveness

Program	**Tutoring Efficiency** (hours of tutoring for an additional month of learning)	**Dosage** (hours)	**Cost Per Pupil** ($)	**Hours of Tutoring Per $1000 Per Pupil**	**Cost Effectiveness** (months of learning for $1,000 per pupil)
A	8	32	$3,200	10	**1.3**
B	90	90	$500	180	**2.0**
C	16	54	$1,600	33.8	**2.1**
D	8	54	$500	108	**13.5**

Overview of the Cost Tool

Audience:

- Tool intended for program providers and researchers
- Cost-related information intended for consumers - policymakers and school leaders

Structure:

- Implementation Details
- Define and Price Ingredients
- Output

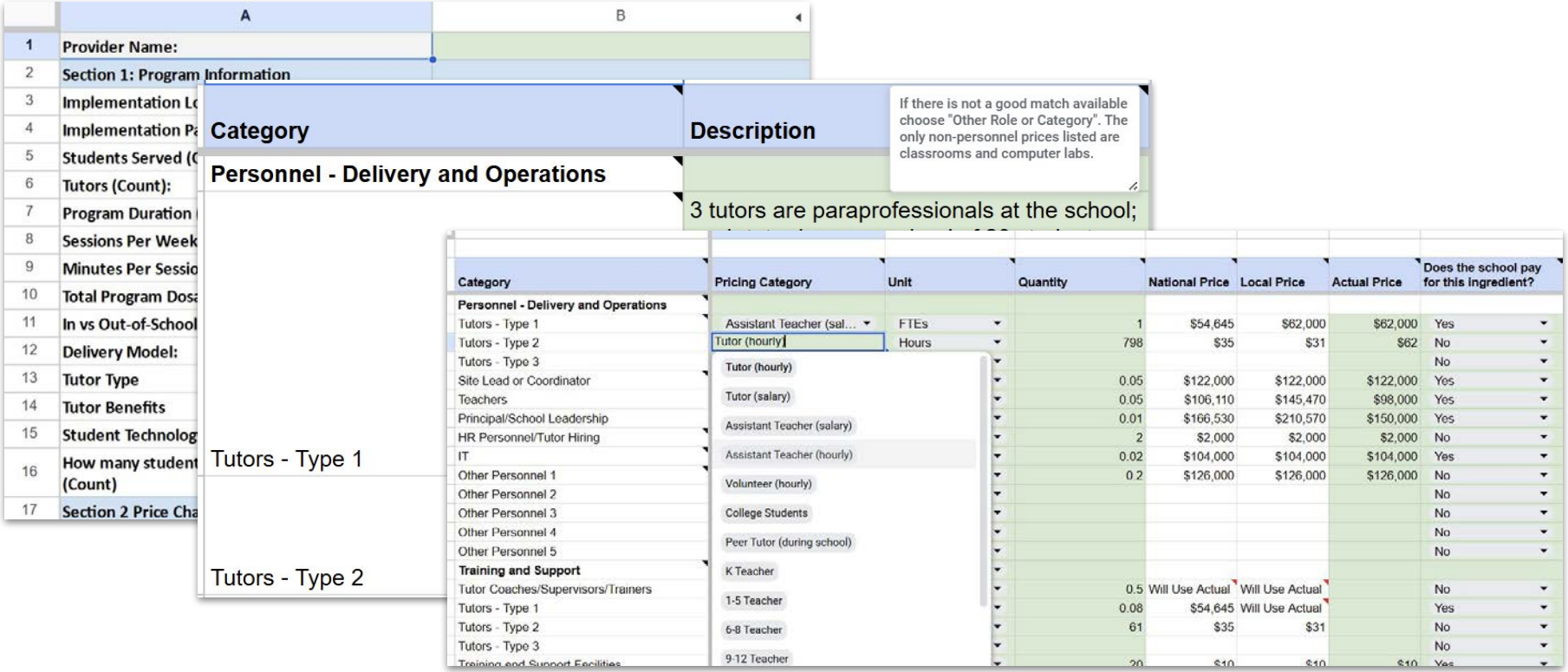
How to Access:

- https://accelerate.us/cost-tool/
- Version 1.0 is a Google Sheet
- Future versions will incorporate user feedback; aim to host in a data collection app

Key Concepts

1. Program implementation setting
2. Cost to society vs. cost to school
3. Hidden/opportunity costs

The Tool



	A	B
1	Provider Name:	
2	Section 1: Program Information	
3	Implementation Lo	
4	Implementation Pa	
5	Students Served (C	
6	Tutors (Count):	
7	Program Duration	
8	Sessions Per Week	
9	Minutes Per Sessio	
10	Total Program Dosa	
11	In vs Out-of-School	
12	Delivery Model:	
13	Tutor Type	
14	Tutor Benefits	
15	Student Technolog	
16	How many student (Count)	
17	Section 2 Price Cha	

Category	Description
Personnel - Delivery and Operations	3 tutors are paraprofessionals at the school;
Tutors - Type 1	
Tutors - Type 2	

If there is not a good match available choose "Other Role or Category". The only non-personnel prices listed are classrooms and computer labs.

Category	Pricing Category	Unit	Quantity	National Price	Local Price	Actual Price	Does the school pay for this ingredient?
Personnel - Delivery and Operations							
Tutors - Type 1	Assistant Teacher (sal...	FTEs	1	$54,645	$62,000	$62,000	Yes
Tutors - Type 2	Tutor (hourly)	Hours	798	$35	$31	$62	No
Tutors - Type 3							No
Site Lead or Coordinator			0.05	$122,000	$122,000	$122,000	Yes
Teachers			0.05	$106,110	$145,470	$98,000	Yes
Principal/School Leadership			0.01	$166,530	$210,570	$150,000	Yes
HR Personnel/Tutor Hiring			2	$2,000	$2,000	$2,000	No
IT			0.02	$104,000	$104,000	$104,000	Yes
Other Personnel 1			0.2	$126,000	$126,000	$126,000	No
Other Personnel 2							No
Other Personnel 3							No
Other Personnel 4							No
Other Personnel 5							No
Training and Support							
Tutor Coaches/Supervisors/Trainers			0.5	Will Use Actual	Will Use Actual		No
Tutors - Type 1			0.08	$54,645	Will Use Actual		Yes
Tutors - Type 2			61	$35	$31		No
Tutors - Type 3							No
Training and Support Facilities			20	$10	$10	$10	Yes

Tutor (hourly)
Tutor (salary)
Assistant Teacher (salary)
Assistant Teacher (hourly)
Volunteer (hourly)
College Students
Peer Tutor (during school)
K Teacher
1-5 Teacher
6-8 Teacher
9-12 Teacher

Guided Practice

Choosing an Implementation (2 minutes)

Three primary use cases:

1. **Conduct a contemporaneous cost analysis as part of an impact evaluation:** If you are currently conducting an RCT, choose the implementation you are evaluating.
2. **Conduct a retrospective cost analysis of a program that was previously evaluated**: If you have a prior RCT you may choose the implementation that was evaluated previously.
3. **Conduct a cost analysis without calculating cost-effectiveness (program planning)**: Choose the model you are most interested in scaling with the district partner(s) you have the best relationship with.

Action: Choose your implementation, write down which of the three use cases you are pursuing.

Identifying an analysis team (5 minutes)

1. Who knows how much things cost your organization? (finance person?)
2. Who knows the most about how the program functions in the chosen implementation? (site lead?)
3. Which roles from your organization are involved in the implementation? (tutors? Supervisors? IT?) Who would be the person to contact in order to set up interviews with relevant roles?
4. Which roles from schools are most likely to be involved in the implementation? (principal, teachers, IT?) Who would be the person to contact to set up interviews with relevant roles?

Action: Write down the members of your analysis team. In chat, share the most unexpected role that you think needs to be part of the analysis team.

Implementation details (5 minutes)

1. **Location** - Choose the implementation setting (schools/districts). If the implementation extends across multiple geographic regions then local pricing may not be relevant
2. **Students served** - How many students received at least one session in the program during the year?
3. **Dosage** - duration in weeks, frequency per week, and minutes per session
4. **Impact estimate** - If the RCT is not already complete, leave it blank
5. **Grades and subject served** - only include the grades served for the implementation being analyzed, not the grades that *could* be served by the model

Action: Fill in the implementation details for the details listed above. Note the answers you don't know. Who might know them?

Describe the Ingredients (5 minutes)

1. Choose one tutor type even if your implementation has more than one tutor type.
2. In the delivery section, describe how much time tutors spend delivering tutoring.
    a. Who are the tutors? Are they paid hourly or salary? How many tutors are there?
    b. How much time do they spend delivering sessions? Prepping for each session? Do they engage in coordination with teachers?
3. In the training and support section, describe how the tutors are trained. What is the time dedicated to training? What is the frequency of training sessions?
4. In the training and support section, describe how the tutors receive ongoing support. How frequently are they coached? How long is each session?

Action: In breakouts, share your description. Do they have additional questions about who the tutors are, how much they work, how they are trained and supported? (10 min)

Pricing the Ingredients (5 minutes)

For the tutor type you described:

1. Choose the Pricing Category - Most likely it will be a professional tutor (hourly or salary), assistant teacher (if they are paraprofessionals), volunteers, or college students.
2. Choose the Unit - it will be either hours or salary
3. Quantify - remember to include all the tutors involved!
    a. If tutors are paid hourly, total up the hours based on the description
    b. If tutors are paid a salary, total up the hours based on the description and divide it by 1894 (for full year staff) or 1195 (for school year staff).
4. Actual Price - if you know, enter the typical hourly rate or salary of the tutors
5. Payer - Does the school pay the tutors (enter yes) or does the provider pay the tutors (enter no)?

Action: In breakouts, fill in the five steps of the pricing process. What program staff might be necessary to help complete the pricing of ingredients?

Breakout Discussion

Action: With a partner, share your description. What additional questions might exist about who the tutors are, how much they work, and how they are trained and supported? (5 min)

Action: Fill in the five steps of the pricing process. What program staff might be necessary to help complete the pricing of ingredients? (5 min)

Discussion: Cost Analysis Practice

Whole group discussion (10 minutes):

1. What observations, aha's, or wonderings do you have from the guided practice?
2. What information about program ingredients and program cost would be most valuable to inform your program improvement efforts?
3. What areas of the cost tool do you need clarity on before you feel confident to complete this tool independently?

Policy & Practice Recommendations

Policy and Practice Recommendations

We propose the following applications of the cost tool and policy recommendations associated with cost-related information:

- **Accelerate and other sponsors of applied research** should require programs and interventions to conduct program-specific cost analysis as part of their grant oversight process.
- **Researchers** should include estimates of program cost alongside estimates of program impact as part of a complete program evaluation.
- **School and district leaders** should require cost effectiveness estimates based on high quality impact evaluations and transparent cost analyses in their procurement decision-making.
- **State policymakers** should require evidence on program costs from vendors applying to state-approved vendor lists.
- **Program providers** should engage in ongoing cost analysis of their programs and interventions to support continuous improvement.

Future Cost Analysis Plans

Timeline

Launch cost analysis work in partnership with grantees

Grantees to complete analysis as part of Phase 5 updates

Release tutorial video; grantees complete cost analyses

Review analyses, gather feedback, adjust tool and process

Require cost analysis for new grantees as part of RCTs

Cost analysis data usage (Spring 2025)

We will:

1. Identify general cost trends across providers
2. Incorporate provider-specific questions into cost-related questions to inform future research

We will NOT:

1. Publicly share identifiable program-specific cost data
2. Publish comparisons of provider costs that identify individual providers explicitly

Questions & Closing

Thank You

Matthew Steinberg

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Closing

Calendar

	August	September	October	November	December
National Landscape	CoP KICK OFF Mon., Aug. 26, 2pm EST		Tues., Oct. 22, 2pm EST		Tues., Dec. 10, 2pm EST
Coherence & Alignment				Thurs., Nov 7, 2pm EST	
Implementation			Tues, Oct. 1, 2pm EST	Thurs., Nov. 21, 2pm EST	

	January	February	March	April	May
National Landscape		CONVENING Tues., Feb. 11 - Wed., Feb. 12			Tuesday, May 6, 2pm EST
Coherence & Alignment	Thurs., Jan 9, 2pm EST			Thurs., April 3rd, 2pm EST	
Implementation	Thurs., Jan 16, 2pm EST			Thurs., April 24th, 2pm EST	

Updates + Reminders, Survey

- Sending out Phase 5 on May 5
- Last CoP Session May 6, 2025