Development Trials & Cost Analysis

CBCSE IES Methods Training in Economic Evaluation Methods Brief

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This methods brief is intended to provide basic guidance for researchers proposing a development trial with a cost-analysis component. The guidance here is framed by the FY 21 RFA from the Institute of Education Sciences (IES).

Costs

The resources delivered to produce an effect. The goal is to understand the costs used to implement the intervention. To do this, the costs must correspond to the production of the effect by reflecting implementation.

IES FY 21 Requirements

Development grants require a cost analysis. Costs must be included even if the program has a list price or will be offered free of charge. The cost analysis must be reflected in the proposal's research plan and personnel sections. Best if the cost or efficiency aspect is threaded throughout the proposal. Include costs in the dissemination plan.

Include costs to implement

Cost analyses conducted for development grant applications should reflect the costs of implementing the program, not just the costs to purchase the program, including personnel time, resources and materials used, facility and equipment needs. The costs to implement can be estimated during the pilot study, but you can also gather data that will inform cost analysis during the development and iteration phase.

> **Costs ≠ $0.** Even if a program is offered free of charge to a school, some level of resource input is required for implementation. For example, if computers are used, they cannot be used for any other purpose during that time and the computers are a necessary input in producing the effect.
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> **Costs ≠ List Price.** A list price is insufficient as a stand in for a cost analysis. If a list price is available, it should be combined with all other costs, such as personnel time or training, to implement.
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> **Contrast matters.** How does your new development differ from standard practice? Will it replace business-as-usual or will this program offer services that are not in contrast to anything else?
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> **Consider specifics.** What resources are provided? Does the program leverage external resources? Did the resources used vary widely? Focus on what is most important to deliver the program as designed and to use what is learned during the pilot and to inform future implementation.

Cost financing

After estimating the total cost to produce an effect, provide information about how the costs would be incurred across sources. Be clear about perspective(s) for analysis and reporting final results – societal perspective including all costs is preferred but can include other perspectives as well.

- Ex: % borne by the school, parents, volunteers, AmeriCorps, or other partners.

Example Ingredients Table

Record the ingredients and quantities used. These are later matched with standardized national prices.

Pilot Site #1: Middle School Science Class		
Program delivered to 100 students over 6 week time frame		
Ingredient	Quantity	Units
Training time	10	Hours
Teacher time	120	Hours
Science workbooks	110	Item
Web application	1	Subscription
Laptop computers	25	Item

Research Plan

Include the following elements in the timeline:

- Include a cost research question.
- Specify the method guiding the cost research.
- Outline cost data collection on ingredients/resources during implementation considering treatment contrast.
- Clarify sample for ingredients data collection. Ideally, data collection for cost analysis will be well-integrated with implementation analysis both for efficiency and to maximize complementarity between the two analyses.
- Outline plan to estimate the value of ingredients with national average prices and how you will make necessary adjustments to prices for comparability.
- Be clear about intended cost metrics (total cost, average cost per participant) and how you will calculate including software tools if appropriate.
- Consider ways to divide/analyze costs (by perspective, by year for multi-year programs, by site for multi-site programs, by type of ingredient, fixed vs. variable, startup vs. ongoing, etc.)
- Make assumptions explicit and plan for sensitivity tests.
- Compare to extant cost research if possible.

Include the cost perspective throughout the proposal in the justification, research plan, timeline, personnel, and dissemination sections

Personnel

Clearly identify who will oversee the cost component and who will be involved in data collection and estimation of costs. Reference training or relevant experience. If needed, provide a plan to obtain additional training or support.

Stay tuned for IES methods training sessions in summer 2021!

Resources:

Ingredients Method Textbook

Levin, H.M., McEwan, P., Belfield, C., Bowden, A.B., Shand, R. (2018). *Economic Evaluation in Education: Cost-Effectiveness and Benefit Cost Analysis, 3rd Edition*. Sage Publications.

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305B200034 to the University of Pennsylvania. The opinions expressed are those of the author and do not represent the views of the Institute or the U.S. Department of Education.