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Title: Beyond the Basics: Conducting a Cost Analysis of a Multi-site Program Implementation

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Beyond the Basics: Conducting a Cost Analysis of a Multi-site Program Implementation

Background/Context

Educational policymakers and practitioners are increasingly interested in assessing the costs associated with implementing evidence-based interventions. Grant awards like those supported by the Department of Education's Institute of Education Science often include a requirement that researchers conduct a cost analysis of the target program. These new requirements and the increased focus on cost analysis makes developing an understanding of and an ability to conduct economic cost analysis critical for researchers and evaluators. Using a commonly accepted approach to cost analysis (Levin, McEwan, Belfield, Bowden, & Shand, 2017), the current study demonstrates how to quantify cost ingredients, account for regional differences in program costs, and adapt the analysis for multiple audiences through the evaluation of Tools for Getting Along (TFGA,) a social problem-solving intervention. Schools and districts are increasingly considering implementation of socioemotional learning programs like TFGA and the associated cost and this cost analysis is relevant to future studies of SEL programs.

Purpose/Objective/Research Question

This cost analysis study asks the following questions:

1. What resources are needed to implement Tools for Getting Along (TFGA) and how can their value be estimated?
2. How can regional differences in the cost of implementing TFGA be represented?
3. How are program costs of TFGA calculated to meet the needs of differing audiences, and what are the different costs that these varying groups may incur?

Setting and Population/Participants/Subjects

There are three cohorts of teachers along with their students who implemented TFGA. Cohort 1 participants were 12 fourth-grade teachers and their students in five elementary schools in a large Northern California school district. Cohort 2 participants were 40 fourth-grade teachers and their students in 13 elementary schools in suburban Oklahoma and Kentucky school districts. The Cohort 3 participants were 11 fourth-grade teachers in rural Kentucky school districts only.

Intervention/Program/Practice

This analysis estimates the costs of implementing TFGA (Daunic et al., 2006), a classroom-based, universally delivered, social problem-solving intervention that is designed to help upper elementary teachers establish a positive, cooperative classroom atmosphere and enable students to become more effective, and proactive problem solvers as they encounter social challenges. For each cohort, schools were randomly assigned to the TFGA condition or the control condition. Table 1 lists the number of schools included in each condition by cohort. The cost analysis estimated the costs associated with the resources needed to implement TFGA for each cohort including regional differences.

Table 1. Number of schools in each TFGA cohorts

| Cohort | Treatment School | Control Schools |
|-----------------|-------------------------|------------------------|
| Cohort 1 | 5 | 5 |
| Cohort 2 | 13 | 15 |
| Cohort 3 | 6 | 6 |

Research Design

This cost study uses the ingredients method as the framework for identifying and estimating the costs of the resources needed to implement TFGA (Levin et al. 2017). The researchers designed tools that supported collecting data within this framework. The researchers used the framework to identify the main sources of cost for TFGA, or the “ingredients,” including personnel time, materials and equipment, and facilities. The researchers used data from interviews with school administrators and program developers, teacher assessments of implementation fidelity, and nationally recognized tools (e.g., Bureau of Labor Statistics) for estimating costs associated with each ingredient. They accounted for regional differences by evaluating region-specific implementation TFGA as well as region-based costs for ingredients, such as personnel salaries and infrastructure costs.

Data Collection and Analysis

Using the ingredients method as a framework, the researchers built a cost estimation tool in Microsoft Excel that supported the collection and estimation of TFGA’s three main categories of resources: personnel (including setup, training, and staff time implementing of the program during the school year), materials and equipment (including teacher handbook, student workbooks, and audiovisual equipment), and facilities (conference rooms for training and classrooms for implementation). The researchers also designed interview protocols to collect cost data from treatment school administrators, such as the numbers of staff, time spent implementing, and facilities costs. The team identified the specific resources and collected region specific cost data from publicly available sources as well as from school leaders through the interviews. The cost analysis incorporated opportunity costs since time, space, or other resources required for implementation cannot be used or invested in other activities or opportunities.

In addition to accounting for regional differences, this analysis estimates the program costs for specific payers, like schools versus a school district, and provides an estimate of the net costs. Net costs only include the costs of new and additional resources, such as a new staff member or new materials, and excludes resources that already exist and would not require additional expenditures, such as existing staff time and salaries. This approach takes into consideration the varying needs of differing stakeholders and allows one to see the total cost of implementation compared to the net cost of implementation for individual stakeholders (school, district, etc.). This distinction may be helpful to a school leader considering the implementation of TFGA, since it shows what resources the leader may need to budget for beyond existing resources.

Preliminary findings

Even though the approaches to implementation were relatively similar across the sites, regional differences in costs led to notably different per school costs for implementing TFGA. Personnel salaries were the greatest contributor to regional differences in program costs. For TFGA, the net costs were also much less than the total cost since much of the program implementation took

place during the existing contracted workday with teachers facilitating the lessons for the program. In the final presentation of these cost findings, the researchers will present the regional costs of the TFGA implementation, as well as a national average based on average cost of resource utilization in the study, in order to provide context. This approach aligns with best practices and recommendations on how to conduct a representative cost analysis of an intervention (Levin et al. 2017).

References

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