



## ABC Support Brief Research Report #3: Cost Analysis of *ABC Support*

### Overview of Approach

As part of the evaluation of *ABC Support*, we were interested in determining the cost of the program. Such information is not only valuable in future replication research, but also useful to individuals who may be interested in adopting the program in educational settings. Our approach involved conducting a basic cost analysis of *ABC Support* to estimate the actual costs of implementing the program. We adopted an “Ingredients Approach,” which focuses on identifying and then pricing the “ingredients” necessary to implement the intervention (Levin et al., 2018). The cost ingredients include all resources needed to implement an intervention, including personnel, space, equipment, materials and other items. The *total cost* of an intervention is the sum of the prices of all ingredients needed to deliver it in practice. In contrast, the *incremental cost* of an intervention represents only those costs above and beyond the resources that already exist (Aos et al., 2004; Boardman et al., 2011). In conducting the cost analysis for *ABC Support*, we considered only the incremental – not total – costs of *ABC Support* implementation. These incremental costs include only expenditures incurred above and beyond the resources, time allocations, and space already available in a classroom (or school).

### Rationale for Incremental Costs

Our rationale for estimating incremental costs rests on *ABC Support* being developed specifically as a supplemental (Tier 2) intervention, designed to fit into a school’s existing schedule and structure for multi-tiered systems of support (MTSS) for reading and behavior. Two data sources confirm that (a) participating schools had in place MTSS for reading and behavior, and (b) *ABC Support* fit well within each classroom’s existing structure.

- First, teachers who participated in the 2018-2019 feasibility trials (n=6) and 2019-2020 pilot study (n=7) for *ABC Support* completed a rating of MTSS implementation in their schools. The average rating for degree of implementation of 17 evidence-based elements of MTSS for reading and behavior items was 2.76 (out of 3.00), indicating that elements of MTSS were, on average, “fully in place.”
- Second, the average rating among teacher participants for the following post-intervention evaluation item was 3.13 (out of 4): *The implementation of ABC Support fit into my regular classroom schedule and routine.* Overall, teachers agreed that their existing classroom structure could accommodate implementation of *ABC Support*.

Because the implementation of *ABC Support* requires equivalent classroom space and is implemented during regular Tier 2 intervention delivery time by teachers/interventionists, neither the intervention time nor space is considered an incremental cost. It should be noted that for experimental purposes only, *ABC Support* was delivered to students individually during the

feasibility trials and pilot study, which resulted in incremental teacher time for one-on-one implementation. These incremental costs, however, are associated *only* with the evaluation procedures used for research purposes. *ABC Support* is intended to be delivered by a classroom teacher or school-based interventionist to a small group of high-risk students (2-4 students) as part of standard Tier 2 reading and behavior support. As such, there will be no incremental cost associated with teacher labor/hours (aside from training, as explained below). Moreover, students will be screened for participation in *ABC Support* and monitored using each school's regular school-wide procedures for identifying students in need of Tier 2 interventions.

### **Determining Costs Based on Key Ingredients**

Table 1 provides a list of the key program ingredients for *ABC Support*, description of each ingredient relative to *ABC Support* implementation, and approximate cost. Overall, the intervention is low in cost because it involves minimal new expenditures to implement. *ABC Support* requires already-available classroom space, relies on the existing school-wide screening procedures, and involves personnel that are already employed by schools to implement Tier 2 interventions. Moreover, the training and implementation materials for *ABC Support* are available online at no-cost (<https://projects.wcer.wisc.edu/abcsupport>).

From a cost-analysis perspective, the resources to implement *ABC Support* do not result in significant expenditures. Nonetheless, current resources within a classroom/school may require reallocation to use *ABC Support* as a substitute for other Tier 2 interventions. From a cost-effectiveness perspective, it is important to underscore the anticipated benefits (effectiveness) of *ABC Support*, based on our preliminary experimental test of outcomes:

- First, the average gain in reading fluency from pre- to post-intervention was 33.7 (words read correctly per minute; WCPM). Depending on the length of each student's baseline condition, the number of weeks between pre- and post-assessment was 4-7. The expected normative growth in WCPM across 4-7 weeks is 6.0 to 10.5. Therefore, *ABC Support* resulted in growth in reading fluency 3-5 times what would be expected for most students.
- Second, through the integration of a simultaneous focus on behavior expectations during each *ABC Support* intervention session, students displayed higher engagement during classroom reading instruction during the intervention period compared to pre-intervention. These positive behavior outcomes were achieved *without* delivering a separate behavior intervention.

Both outcomes demonstrate the promise for significant gains relative to the minimal costs of implementing *ABC Support*. Moreover, post-intervention interviews with teachers (n=3 to date) confirm that teachers reported that *ABC Support* is equally or more effective in strengthening reading fluency and engagement behaviors compared to other Tier 2 academic and/or behavior interventions used in their schools.

Table 1. Key Ingredients to Implement ABC Support.

Ingredient	Description	Estimated Cost
Personnel time for intervention implementation	Per interventionist: 20 minutes per session (day), 3 sessions (days) per week, for 6-8 weeks.	No incremental cost: Intervention is implemented during regular time devoted to Tier 2 intervention delivery.
Personnel time for training (online training plus independent study)	Per interventionist: Approximately 4 hours for one-time training (available online; no transportation costs) and follow-up coaching or review, as needed.	Incremental cost: If not included as part of regular professional development, then the cost is based on hourly wage of interventionists.
Classroom space	Per small group: Space to accommodate 2-4 students, 20 minutes per day, 3 days per week, for 6-8 weeks	No incremental cost: Intervention is implemented in classrooms during regular Tier 2 intervention periods.
<i>ABC Support</i> manuals and consumable intervention materials	Per interventionist: 86-page <i>ABC Support Manual</i>  Per student: 148-page <i>ABC Support Implementation Materials Handbook</i>  Additional intervention materials per small group: markers, stickers, pencils	Incremental cost: ~ \$15.00 for printing, paper, and binder ~ \$20.00 for printing, paper, and binder x 4 students = \$80.00  ~ \$10.00  Total = ~ \$105.00 <sup>a</sup>
Screening and progress-monitoring	Per student: Time to participate in school-wide reading and behavior screening procedures	No incremental cost: Existing screening procedures are used to identify and monitor performance of students participating in <i>ABC Support</i> .

<sup>a</sup> Based on printing costs to reproduce manuals and materials for participants in the pilot study.

## References

- Aos, S., Lieb, R., Mayfield, J., Miller, M., & Penucci, A. (2004). *Benefits and costs of prevention and early intervention programs for youth*. Washington Institute for Public Policy.
- Boardman, A. E., Greenberg, D. H., Vining, A., & Weimer, D. L. (2011). *Cost-benefit analysis: Concepts and practice* (4th ed.). Pearson Prentice Hall.
- Levin, H. M., McEwan, P. J., Belfield, C. R., Bowden, A. B., & Shand, R. (2018). *Economic evaluation in education: Cost-effectiveness and benefit-cost analysis* (3<sup>rd</sup> ed.). Sage.

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