

# Promoting Alternative Thinking Strategies (PATHS®)

Intervention Brief | Supportive Learning Environment Topic Area

WHAT WORKS  
CLEARINGHOUSE™

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A supportive learning environment is one that is safe, includes effective and fair use of appropriate discipline practices, and promotes positive student outcomes and teacher practice. The *Promoting Alternative Thinking Strategies (PATHS®)* program is a curriculum that aims to promote emotional and social competencies and to reduce aggression and behavior problems in elementary school children. *PATHS®* is delivered through short lessons given two to three times a week over the school year. The program is based on the principle that understanding and regulating emotions are central to effective problem solving. The lessons focus on (1) self-control, (2) emotional literacy, (3) social competence, (4) positive peer relations, and (5) interpersonal problem-solving skills. There is a separate curriculum for each grade.

This What Works Clearinghouse (WWC) intervention report, part of the WWC’s Supportive Learning Environment topic area, explores the effects of the *PATHS®* program on student emotional awareness, social interactions, behavior, and academic achievement. The WWC identified 35 studies of the *PATHS®* program. Two of these studies meet WWC standards. The evidence presented in this report is from studies of the effects of the *PATHS®* program on students—including 70% White, 11% Asian, and 8% Black students, and students with and without disabilities—spanning grades 1 through 5 in both urban and suburban districts.

## What Happens When Students Participate in the *PATHS®* program?

**The evidence indicates that implementing the *PATHS®* program has no discernible effects on students’ academic achievement, social interactions, observed individual behavior, or emotional status.**

Findings on the *PATHS®* program from two studies that meet WWC standards are shown in Table 1. The table reports an effectiveness rating, an improvement index, and the number of studies and students that contributed to the findings. The effectiveness rating is based on the quality of the designs used in studies, whether the findings are favorable or unfavorable for the intervention, and the number of studies that tested the intervention. See Box 1 for more information on interpreting effectiveness ratings.

In order to help readers judge the practical importance of an intervention’s effect, the WWC translates findings across

studies into an “improvement index” by averaging findings that meet WWC standards within the same outcome domain. The improvement index can be interpreted as the expected change in percentile rank for an average comparison group student if that student had received the intervention. For example, an improvement index of -3 means that the expected percentile rank of the average comparison group student would decrease by 3 points if the student received the *PATHS®* program. A positive or negative improvement index does not necessarily mean the estimated effect is statistically significant. Results for each individual outcome measure within domains are shown in Table 4.

The evidence presented in this report is based on available research. Findings and conclusions could change as new research becomes available.

**Table 1. Summary of findings on the *PATHS®* program from studies that meet WWC standards**

Outcome domain	Effectiveness rating	Study Findings	Evidence meeting WWC standards (version 4.0)	
		Improvement index (percentile points)	Number of studies	Number of students
Academic achievement	No discernible effects	-3	1	1,582
Student social interaction	No discernible effects	na	1	133
Observed individual behavior	No discernible effects	na	1	113
Student emotional status	No discernible effects	na	1	133

na = not available.

## BOX 1. HOW THE WWC REVIEWS AND DESCRIBES EVIDENCE

The WWC evaluates evidence based on the quality and results of reviewed studies. The criteria the WWC uses for evaluating evidence are defined in the [Procedures and Standards Handbooks](#) and the [Review Protocols](#). The studies summarized in this report were reviewed under WWC Standards (version 4.0) and the Supportive Learning Environment topic area protocol (version 4.0).

To determine the effectiveness rating, the WWC considers what methods each study used, the direction of the effects, and the number of studies that tested the intervention. The higher the effectiveness rating, the more certain the WWC is about the reported results and about what will happen if the same intervention is implemented again. The following key explains the relationship between effectiveness ratings and the statements used in this report:

Effectiveness Rating	Rating interpretation	Description of the evidence
Positive (or negative) effects	The intervention is <i>likely</i> to change an outcome	Strong evidence of a positive (or negative) effect, with no overriding contrary evidence
Potentially positive (or negative) effects	The intervention <i>may</i> change an outcome	Evidence of a positive (or negative) effect with no overriding contrary evidence
No discernible effects	The intervention <i>may result in little to no change</i> in an outcome	No affirmative evidence of effects
Mixed effects	The intervention <i>has inconsistent effects</i> on an outcome	Evidence includes studies in at least two of these categories: studies with positive effects, studies with negative effects, or more studies with indeterminate effects than with positive or negative effects

## How is the PATHS® Program Implemented?

The following section provides details of how districts and schools can implement the PATHS® program. This information can help educators determine whether implementing this intervention would be feasible in their districts or schools. Information on the PATHS® program presented in this section comes from the studies that meet WWC standards (Humphrey et al., 2016; Kam et al., 2004) and from correspondence with the developer. Drs. Mark T. Greenberg and Carol A. Kusché are co-developers of the intervention, and PATHS Program LLC is the distributor. The PATHS® program is a Collaborative for Academic, Social, and Emotional Learning SElect program (CASEL) and a Blueprints Certified Model Program.

- **Goal:** The PATHS® program aims to promote emotional and social competencies and reduce aggression and behavior problems in elementary school children.
- **Target population:** The PATHS® program is designed for students in grades pre-K through 5, including general education students and students with disabilities.
- **Method of delivery:** The PATHS® program is a curriculum focused on social and emotional competencies. Through scripted lessons, elementary school teachers lead instruction, including a combination of whole-class and small-group instruction. The program also has in-home activities.
- **Frequency and duration of service:** The PATHS® program is designed to be delivered over the course of one or multiple school years, with 20- to 40-minute sessions occurring two or three times per week for the entire school year.
- **Intervention components:** The PATHS® program has separate curricula for each grade level and can be modified for students with disabilities. Key components and features are described in Table 2.

**Comparison condition:** In the two studies that contribute to this intervention report, students in the comparison group received typical instruction, which differed by study. In one study, typical instruction included schoolwide social and emotional learning initiatives, including components from UK's Social and Emotional Aspects of Learning (SEAL) initiative, the UK's National Healthy Schools program, and the Targeted Mental Health in Schools program. In the other study, typical instruction did not include any social and emotional learning.

**Table 2. Components of the PATHS® program**

Key component	Description
<b>Lesson topics</b>	Each lesson focuses on at least one of five topics (self-control, emotional literacy, social competence, positive peer relations, or interpersonal problem-solving skills), although aspects of all five topics are integrated into each lesson. <i>PATHS</i> ® lessons include instruction in identifying, labeling, and managing feelings; understanding the difference between feelings and behaviors; delaying gratification; controlling impulses; reducing stress; reading and interpreting social cues; understanding the perspectives of others; using steps for problem solving and decision making; having a positive attitude toward life; promoting self-awareness; and developing nonverbal and verbal communication skills. Lessons for each grade level include scripts for teachers but can be adapted to meet the needs of each classroom.
<b>Delivery of lessons</b>	The <i>PATHS</i> ® program is implemented by a classroom teacher as part of students' regular instruction. Lessons may use grade-appropriate materials included with the curriculum such as posters, charts, cards related to different emotions (Feeling Faces cards), books, coloring books, stickers, and puppets. Each <i>PATHS</i> ® lesson ends with reminders and suggestions for generalizing what was taught to settings outside the classroom. For example, students might be instructed to complete "feeling faces cards," which help students recognize and be aware of how they are feeling at certain times of the school day. This can reinforce emotional awareness both in classrooms and in other settings. Finally, each <i>PATHS</i> ® lesson includes suggestions or materials for engaging parents, such as a family letter that shares key concepts and objectives. These suggestions include descriptions of activities to conduct at home to extend learning and encourage practice and discussion. The program is designed to be delivered over the course of multiple school years, with 20- to 40-minute sessions occurring two or three times per week for the entire school year. In Humphrey et al. (2016), teachers implemented the program for two years with minor modifications to the content to account for British culture (for example, changing the word principal to headteacher, and the word soccer to football). These changes did not affect the program's core content or structure. In Kam et al. (2004), teachers implemented a pilot version of the curriculum over one school year with 60 lessons covering units on self-control, emotions, and problem solving. The lessons were modified for students in special education to focus primarily on behavioral self-control, rather than advanced problem solving.
<b>Teacher training</b>	The <i>PATHS</i> ® program has six hours of online training for teachers that leads to certification. Teachers have access to training resources and materials online, including an introductory teacher manual. Additional support services, such as on-site training and coaching, are also available. Teacher training differed across the two studies included in this intervention report. In Humphrey et al. (2016), teachers received one full day of training and a half-day follow-up four months later, along with ongoing technical support and assistance from trained members of the research team. In Kam et al. (2004), teachers received an initial three-day training and weekly support during implementation with modeling, coaching, and feedback.

## What Does the *PATHS*® Program Cost?

This preliminary list of costs is not designed to be exhaustive; rather, it provides educators an overview of the major resources needed to implement the *PATHS*® program.

The program costs described in Table 3 are based on the information available as of January 2020.

**Table 3. Cost ingredients for *PATHS*®**

Cost ingredients	Description	Source of funding
<b>Personnel</b>	The <i>PATHS</i> ® program is delivered by a classroom teacher as part of students' regular instruction. Before implementing <i>PATHS</i> ®, teachers complete two online self-paced training modules (3 hours each), which are included when purchasing the classroom implementation package. Content presented during these online training sessions cover implementation and promoting schoolwide implementation. Teachers receive a training certificate in the <i>PATHS</i> ® program upon completing the training modules. Additional services, including full-day on-site training and coaching programs for teachers and school staff about embedding the <i>PATHS</i> ® program into their academic programming and schoolwide culture, are also available after initial training. Costs for these services are available from the developer upon request.	Schools provide time for teachers to participate in the training and to deliver the intervention.
<b>Facilities</b>	The intervention is typically implemented in the students' regular classrooms. For the training, teachers need access to computers and headsets.	School districts or schools provide the classroom facilities.
<b>Equipment and materials</b>	One classroom implementation package, which provides the materials needed for a single teacher to implement the program in one grade, costs \$439 to \$879, depending on grade level. Each package includes a teacher guide with scripts for each lesson, grade-level appropriate materials (such as books, coloring books, stickers, Feeling Faces cards, and puppets), a set of classroom posters, and 25 copies of materials for parents. The classroom package also includes access to online materials, including an introductory teacher manual and materials for teachers to use when communicating with families.	School districts or schools usually purchase <i>PATHS</i> ® materials. Funding typically comes from curriculum, counseling, school climate, and student mental health budgets, including federal Title I and Title IV-A accounts.

## For More Information:

About the PATHS® Program

PATHS® Program LLC, 12408 West Encanto Boulevard, Avondale, AZ 85392

Email: [info@pathsprogram.com](mailto:info@pathsprogram.com). Web: <http://pathsprogram.com/>. Phone: (877) 71-PATHS (717-2847)

About the cost of the intervention

Web: <https://shop.pathsprogram.com/>

About the studies that meet WWC standards

Humphrey, N., Barlow, A., Wigelsworth, M., Lendrum, A., Pert, K., Joyce, C., Stephens, E., Wo, L., Squires, G., Woods, K., Calam, R., & Turner, A. (2016). A cluster randomized controlled trial of the Promoting Alternative Thinking Strategies (PATHS®) curriculum. *Journal of School Psychology, 58*, 73–89.

Kam, C. M., Greenberg, M. T., Kusché, & C. A. (2004). Sustained effects of the PATHS® curriculum on the social and psychological adjustment of children in special education. *Journal of Emotional & Behavioral Disorders, 12*(2) 66–78. Retrieved from <https://eric.ed.gov/?id=EJ694140>

## In What Context Was the PATHS® Program Studied?

The following section provides information on the setting of the two studies of the PATHS® program that meet WWC standards, and a description of the participants in the research. This information can help educators understand

the context in which the studies of the PATHS® program were conducted, and determine whether the program might be suitable for their setting.

### WHERE THE STUDY WAS CONDUCTED



2 studies, 1,715 students in 52 elementary schools in 13 districts in **Washington** and the **United Kingdom**



urban and suburban districts

#### Race



#### Gender



Free & Reduced-Price Lunch: 31%

Special Education: 23%

English Learners: 23%

#### Grades



### LEARN MORE



Read more about the PATHS® intervention and the studies that are summarized here in the [Intervention Report](#).