

Synthesizing and Building Evidence of “What Works” in Education

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What Works Clearinghouse™

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Overview

- **What is the *What Works Clearinghouse*TM ?**
- **Key audiences for the WWC**
- **Systematic reporting standards**
- **Eligibility of studies for WWC review**
- **Example of a WWC intervention report and the underlying WWC reviews of individual studies**
- **Related requirements of IES research replication grants**
- **Connecting with the WWC**

What is the *What Works Clearinghouse*TM?

- Begun in 2002 as an initiative of the newly-established Institute of Education Sciences (IES)
- Mission is to be a *trusted source of scientific evidence for what works to improve student outcomes or other relevant education outcomes*
- Reviews *original* research on education *interventions*
 - “Intervention” means a program, product, practice, or policy
 - WWC does not review descriptive studies, qualitative studies, secondary data analyses, or research syntheses
- The WWC currently includes IES staff plus 6 contractors and 7 contracts funded at about \$10 million/year total

Key Audiences for the *What Works Clearinghouse*TM

- ED grantees and grant applicants interested in the [strength of evidence](#) from education research that could inform proposed education projects
- ED program offices interested in the quality of ED-funded impact studies and project evaluations
- Teachers, principals, and other school leaders seeking [guides to evidence-based practices](#) that describe how to implement those practices
- State and local administrators seeking to assess claims of effectiveness for education [interventions](#) or compare the effectiveness of interventions in different [topic areas](#)

Systematic Reporting Standards

- Only *publicly available* studies are eligible for WWC review
 - ED-funded studies available through the [Education Resources Information Center](#) (ERIC), a free, publicly available, searchable database of education research
 - Studies only available behind paywalls for journals or books
 - Unpublished, *non-peer reviewed* studies available to the public online
- The WWC queries study authors for information needed for the WWC review but not reported in studies
- In the case of multiple manuscripts, the WWC prioritizes the *final, peer-reviewed manuscript* submitted to ERIC, or else the *final, published version*

Eligibility of Studies for WWC Review

- Systematic reviews of interventions or practices include all studies that meet the requirements defined in the corresponding WWC [topic area review protocol](#) for eligible...
 - interventions
 - populations
 - settings
 - outcomes
 - time frames
 - study designs
- Interventions are prioritized for WWC intervention reports on the basis of the number of eligible studies of the intervention available for WWC review and that are likely to meet WWC [design standards](#) for RCTs, QEDs, RDDs, or SCDs

Find WWC Intervention Reports by Topic Area

The [Find What Works!](#) tool allows users to search for **systematic reviews of evidence** on [interventions](#) by topic area

The screenshot shows the IES WWC 'Find What Works' website. The browser tabs include 'ies WWC | Find What Works!', 'ies Results', 'ies WWC | First Step to Success', 'ies Study', 'ERIC - EJ863236 - A Random...', 'ies WWC | Children Identified', 'ies Study', and 'ies Extract Data'. The address bar shows 'ies.ed.gov/ncee/wwc/'. The website header features the IES WWC logo, 'What Works Clearinghouse', a search bar, and a 'Go' button. Below the header is a green banner with the text 'Select topics to Find What Works based on the evidence'. This banner contains a grid of topic area icons: Literacy, Mathematics, Science, Behavior (highlighted in purple), Children and Youth with Disabilities, English Learners, Teacher Excellence, Charter Schools, Early Childhood (Pre-K), K-12 Kindergarten to 12th Grade, Path to Graduation, and Postsecondary. Below the banner, the 'WELCOME TO THE WHAT WORKS CLEARINGHOUSE' section contains a paragraph about the WWC's mission. The 'HIGHLIGHTS' section features a carousel slide titled 'Using the What Works Clearinghouse to Find ESSA Tiers of Evidence' with a sub-heading 'Learn to use WWC tools to locate studies that meet Every Student Succeeds Act'. The 'QUICK LINKS' section includes buttons for 'INTERVENTION REPORTS', 'PRACTICE GUIDES', and 'REVIEWS OF INDIVIDUAL STUDIES'. The Windows taskbar at the bottom shows the time as 11:58 AM on 10/2/2019.

See Which Interventions Have Evidence of Positive Effects

[Find What Works!](#) allows users to see which [interventions](#) have evidence of positive or potentially positive effects

The screenshot shows the IES WWC Find What Works website interface. The main heading is "Find What Works based on the evidence". Below this, there are search filters for "Behavior", "Children and Youth with Disabilities", and "Kindergarten to 12th Grade". A sidebar on the left allows filtering by topic, with "Behavior" and "Kindergarten to 12th Grade" selected. The main content area displays "10 Results filtered by:" and a table of interventions with their effectiveness evidence and grades examined.

Evidence of effectiveness	Intervention	Grades examined	Compare
	First Step to Success	K-3	<input type="checkbox"/>
	Coping Power	4-5	<input type="checkbox"/>
	Fast Track: Elementary School	K	<input type="checkbox"/>
	Early Risers	K-2	<input type="checkbox"/>
	Functional Behavioral Assessment-based Interventions	K-12	<input type="checkbox"/>
	The Incredible Years	PK-2	<input type="checkbox"/>
	Check & Connect	9-12	<input type="checkbox"/>
	Pivotal Response Training	PK	<input type="checkbox"/>
	Second Step		<input type="checkbox"/>
	Tools for Getting Along		<input type="checkbox"/>

See the Individual Studies Behind an Intervention Report

The WWC only reports and synthesizes findings from eligible impact studies that *meet WWC design standards, with or without reservations*

IES WWC What Works Clearinghouse

WWC SUMMARY OF EVIDENCE FOR THIS INTERVENTION Export Print

First Step to Success

First Step to Success is an early intervention program designed to help children who are at risk for developing aggressive or antisocial behavioral patterns. The program uses a trained behavior coach who works with each student and his or her class peers, teacher, and parents for approximately 50–60 hours over a 3-month period. *First Step to Success* includes three interconnected modules: screening, classroom intervention, and parent training.

Reviewed Research

Children Identified With Or At Risk For An Emotional Disturbance

March 2012 EVIDENCE SNAPSHOT INTERVENTION REPORT (39)

Outcome domain	Effectiveness rating	Studies meeting standards	Grades examined	Students	Improvement Index
Emotional/internal behavior	++	1 study meets standards	K	46	10
External behavior	+++	2 studies meet standards	K-3	243	28
		Walker, H. M., Seeley, J. R., Small, J., Severson, H. H., Graham, B. A., Feil, E. G., ... Forness, S. R. (2009)	1-3	197	19
		Walker, H., Kavanagh, K., Stiller, B., Golly, A., Severson, H., & Feil, E. (1998)	K	46	34

Improvement Index: An indicator of the effect of the intervention, 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 more, please see the WWC Glossary entry for improvement index.

Drilling Down to the Review of an Individual Study

The WWC study page includes information on the study, the WWC's review of it, and study findings meeting WWC standards

The screenshot shows a web browser window displaying the WWC (What Works Clearinghouse) website. The page title is "WWC REVIEW OF THIS STUDY". The main content area features a summary of the study: "A randomized controlled trial of the First Step to Success early intervention: Demonstration of program efficacy outcomes in a diverse, urban school district." Below this, the authors and year are listed: "Walker, H. M., Seeley, J. R., Small, J., Severson, H. H., Graham, B. A., Feil, E. G., . . . Forness, S. R. (2009). Journal of Emotional and Behavioral Disorders, 17(4), 197-212. Retrieved from: <https://eric.ed.gov/?id=EJ863236>".

The page also includes a section titled "RANDOMIZED CONTROLLED TRIAL EXAMINING 197 STUDENTS, GRADES 1-3". Below this, there are navigation tabs: "Review Details", "Findings", "Sample Characteristics", "Study Details", and "Additional Sources". The "Review Details" tab is active, showing the following information:

- Reviewed:** March 2012
- For:** [First Step to Success Intervention Report - Children Identified With Or At Risk For An Emotional Disturbance](#)
- Using:**
 - [Children Identified With Or At Risk For An Emotional Disturbance Review Protocol 2.0](#)
 - [Review Standards 2.1](#)
- Rating:** Meets WWC standards without reservations

Two callout boxes highlight the study's quality: "MEETS WWC STANDARDS WITHOUT RESERVATIONS" and "AT LEAST ONE STATISTICALLY SIGNIFICANT POSITIVE FINDING".

At the bottom of the page, a disclaimer states: "This review may not reflect the full body of research evidence for this intervention. Please see the [WWC summary of evidence](#)".

See and Download the Protocol Used for the WWC Review

The WWC protocol page includes both current and prior versions of the topic area review protocol

The screenshot shows the IES WWC website interface. At the top, there is a navigation bar with the IES WWC logo and a search bar. Below the navigation bar, the main content area is titled "REVIEW PROTOCOLS" and "Children Identified With or at Risk for an Emotional Disturbance Evidence Review Protocol". A dropdown menu labeled "Select Document Version" is open, showing two options: "Version 3.0 - December 2015 (250 KB)" and "Version 2.0 - October 2011 (313 KB)". The "Content" tab is selected, and the page displays the following text:

This review-specific protocol guides the review of research that informs the What Works Clearinghouse (WWC) intervention reports in the Children Identified With or at Risk for an Emotional Disturbance topic area. The review-specific protocol is used in conjunction with the **WWC Procedures and Standards Handbook** (version 3.0).

This review focuses on interventions designed for use with K-12 students identified as having an emotional disturbance (ED) or at risk for classification of ED. This review will focus on the effect of interventions on the following types of outcomes: academic, problem behaviors, school engagement, self-determination, social-emotional competence, and transitional (i.e., the behavioral, social, functional skills that enable young adults with disabilities to obtain and hold meaningful employment, live independently, and obtain further training and education).

The following research questions guide this review:

- Which interventions are effective at improving outcomes of students identified with an ED, students at risk for classification of ED, students who have an emotional or behavior disorder consistent with ED, or students who are receiving an intervention to prevent classification? Are some interventions more effective than others for these students?
- Does the effectiveness of interventions for students with an ED vary by type of outcome?
- Are some interventions more effective for particular subgroups of students with an ED (for example, differences based on grade/age, English learner status, gender, race/ethnicity, socioeconomic status, school level) or in particular settings?

At the bottom of the page, there is a URL bar showing the link to the protocol document: https://ies.ed.gov/ncee/wwc/Docs/ReferenceResources/wwc_ebd_protocol_v2.pdf. The Windows taskbar is visible at the bottom of the screenshot, showing the time as 12:10 PM on 10/2/2019.

See and Download the Handbook(s) Used for the WWC Review

The screenshot shows the IES WWC Clearinghouse website. The browser tabs include 'ies WWC | Find What Work...', 'ies Results', 'ies Study', 'ies WWC | Handbooks and...', 'ies Study', 'ERIC - EJ863236 - A Ra...', 'ies WWC | Children Identifi...', 'ies Extract Data', and 'ies WWC | Reviews of Indi...'. The address bar shows 'ies.ed.gov/ncee/wwc/Handbooks'. The website header features the IES WWC logo, the text 'What Works Clearinghouse', a 'MENU' button, and a search bar with a 'Go' button. Below the header, the main content area is titled 'HANDBOOKS AND OTHER RESOURCES' and includes a navigation menu with 'Procedures and Standards Handbooks', 'Review Protocols', 'Supplemental Materials', and 'Webinars'. The 'Procedures and Standards Handbooks' section is active, showing a sidebar with 'Current Standards Version 4.0' and 'Prior Standards'. The main content area states: 'All previous versions of the WWC Procedures and Standards Handbook are available for download.' Under the heading 'Prior Standards', there is a list of links: 'Procedures and Standards Handbook Version 3.0 (1.3 MB)', 'Summary of changes (96 KB) between the Procedures and Standards Handbook Version 2.1 and 3.0', 'Version 2.1, Sep 2011 (1.3 MB)', 'Version 2.0, Dec 2008 (994 KB)', and 'Version 1.0, May 2008 (506 KB)'. At the bottom of the page, there is a section titled 'Connect With the WWC'. The Windows taskbar at the bottom shows various application icons and the system clock displaying '12:22 PM 10/2/2019'.

Download Data on Study Findings Meeting WWC Standards

Example:
Download
data on the
findings for
*First Step to
Success*
that met
WWC
standards

IES WWC Clearinghouse MENU Search Go

DATA FROM INDIVIDUAL STUDIES

The review of individual studies underlies all What Works Clearinghouse (WWC) products, from reports on a single study to a systematic review of all studies on an intervention. The WWC provides the capability for users to extract data resulting from WWC reviews for every study that meets standards.

The WWC provides this extraction tool as part of our open data approach to increase transparency. The continually updated dataset provides:

- **Greater transparency** for WWC reviews, allowing users to replicate WWC findings and reports
- **Comprehensive information** to encourage research questions beyond those asked by the WWC
- **Detailed study findings** to allow for meta-analysis
- **Contextual information** for the examination of what works for whom and under what conditions
- **A pre-merged file** containing data from all findings, studies, and intervention reports, with new publicly available data, including
 - WWC ratings of individual findings
 - The Level 1 unit of analysis
 - An indicator of "multisite"
 - Topic areas
 - Posting date
 - ESSA evidence tiers

Use the filters below for the pre-merged file to download targeted data from intervention reports, studies, and findings. Users can filter by WWC study rating, topics, protocols, interventions, ESSA ratings, standards versions, and outcome domains. Users may also choose to download data from intervention reports, studies and findings in separate files; however, the filters are for use with the merged file.

The merged file contains data from intervention reports, studies that Meet WWC Group Design, Single Case Design, and Regression Discontinuity Design *Standards With and Without Reservations*, as well as individual findings from these studies.

This file does not include studies or finding from studies that *Do Not Meet WWC Standards*. Users wishing to download all studies in the WWC database, including those that *Do Not Meet WWC Standards*, should download the separate file. The merged file, as well as the separate file downloads, do not include findings that do not meet WWC standards.

Meets WWC standards with or without reservations | All Topics | All Protocols (54) | First Step to Success | All ESSA Ratings | All Standards Versions | All Outcome Domains

Download the Intervention Reports, Findings and Studies data to the separate files

Download Merged File

WWC-export-archi...zip | WWC-export-archi...zip | Show all

12:14 PM 10/2/2019

See the Study Page at Education Resources Information Center

The ERIC page includes the study abstract, a URL to full text of study, whether the study was peer reviewed, the ED grant number, the WWC study rating, and the WWC study page URL

The screenshot shows a web browser window with the ERIC website. The browser tabs include 'ies WWC | Find What Works!', 'ies Results', 'ies WWC | First Step to Success', 'ies Study', 'ERIC - EJ863236 - A Random...', 'ies WWC | Children Identified', 'ies Study', and 'ies Extract Data'. The address bar shows 'eric.ed.gov/?id=EJ863236'. The ERIC logo is at the top left, with a search bar and 'Collection Thesaurus' tabs. Below the search bar are filters for 'Peer reviewed only' and 'Full text available on ERIC'. The main content area displays the title 'A Randomized Controlled Trial of the First Step to Success Early Intervention: Demonstration of Program Efficacy Outcomes in a Diverse, Urban School District' by Walker, Hill M.; Seeley, John R.; Small, Jason; Severson, Herbert H.; Graham, Bethany A.; Feil, Edward G.; Serna, Loretta; Golly, Annemieke M.; Forness, Steven R. The abstract text is visible, starting with 'This article reports on a randomized controlled trial of the First Step to Success early intervention...'. A 'Peer reviewed' badge is present on the right side of the page. The footer includes 'ED.gov:ies INSTITUTE OF EDUCATION SCIENCES' and various links like 'Privacy | Copyright | Contact Us | Selection Policy'.

Related Requirements of IES Research Replication Grants

- **Preregistration:** The study must be preregistered in a repository in a manner consistent with the IES *Standards for Excellence in Education Research* ([SEER](#)), for example in the *Registry of Efficacy and Effectiveness Studies* ([REES](#)) associated with the *Society for Research on Educational Effectiveness* ([SREE](#))
- **Conflicts of interest:** key personnel designing or conducting independent evaluations of interventions must NOT have related financial interests
- **Public access requirement:** final manuscripts accepted in a [peer-reviewed scholarly publication](#) must be submitted to [ERIC](#) to be accessible to the public at no charge in a searchable database [book chapters, editorials, reviews, and non-peer-reviewed conference proceedings do not count]
- **Data availability:** a *Data Management Plan* must specify how, and for how long, data collected for the study will be made available to other researchers

Connecting with the WWC

- Website: whatworks.ed.gov

 The WWC [Help Desk](#)

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 [Twitter](#)

 [NewsFlash](#)

- Jon's email: jonathan.jacobson@ed.gov