

July 2010

DEPARTMENT OF
EDUCATION

Improved
Dissemination and
Timely Product
Release Would
Enhance the
Usefulness of the
What Works
Clearinghouse



GAO

Accountability * Integrity * Reliability



Highlights of [GAO-10-644](#), a report to congressional committees

Why GAO Did This Study

In connection with the Omnibus Appropriations Act, 2009, GAO was required to study the What Works Clearinghouse (WWC), a federal source of evidence about effective education practices. Operating through a 5-year contract awarded by the U.S. Department of Education's Institute of Education Sciences (IES), the WWC reviews education research and disseminates its findings. GAO examined: (1) the extent to which the WWC review process meets accepted standards for research evaluation and how the WWC has responded to recommendations and criticism, (2) how WWC output and costs have changed over time and how its performance is measured, and (3) how WWC products are disseminated and how useful educators find them to be. To conduct its work, GAO reviewed WWC-related documents, analyzed cost and performance data, surveyed all states and a nationally representative sample of school districts, and interviewed IES officials, WWC contractors, researchers, and others.

What GAO Recommends

GAO recommends that IES: develop and implement strategies to avoid backlogs in WWC product reviews; establish performance measures related to costs and usefulness; and improve dissemination efforts to promote awareness and use of the WWC. Education generally agreed with GAO's recommendations.

View [GAO-10-644](#) or [key components](#). For more information, contact Cornelia Ashby at (202) 512-7215 or ashbyc@gao.gov.

DEPARTMENT OF EDUCATION

Improved Dissemination and Timely Product Release Would Enhance the Usefulness of the What Works Clearinghouse

What GAO Found

GAO as well as a congressionally mandated panel of experts, found that the WWC's review process, which includes screening studies to determine if they meet WWC criteria, follows accepted standards for evaluating research on the effectiveness of education interventions. WWC is responding to recommendations made by the expert panel to further improve its review and reporting processes. For example, the panel recommended improvements in the way the WWC presents information to readers on the reasons why studies do not qualify for review. The WWC is revising a report template to include a table summarizing which studies met or did not meet WWC criteria for evaluating research. The WWC has also responded to researchers who have criticized the WWC for presenting limited information because its screening criteria exclude some rigorous research designs that may be appropriate for evaluating certain education programs, such as special education. The WWC responded to this criticism by creating new standards that include two additional study designs and by creating a new product, called a practice guide, which includes a wider range of research.

WWC's report output and scope increased under the current contract. For example, the WWC increased its production of various reports, introduced new products, and developed new processes for evaluating research. However, IES had a substantial backlog in its product review process from January 2009 to May 2010. The backlog generally decreased the timeliness of WWC reports, with 20 reports being delayed by up to 6 months. To support the increases in output and scope, WWC's costs doubled from the previous contract to the current one. Both contracts designated about 60 percent of costs to production, while the other 40 percent of costs support other tasks, such as communications, dissemination, and process development. IES' performance goals for the WWC primarily relate to the number of reports produced. However, IES has not developed performance measures related to the cost or usefulness of WWC products.

Education uses WWC contractors, Regional Educational Laboratories (RELS) and the Doing What Works (DWW) Web site to disseminate information about WWC products; however, awareness and use of the WWC varies among states, districts, teachers, and principals. WWC contractors disseminate product information in various ways including email alerts and presentations. The RELs host events featuring WWC products for state, district, and school officials and DWW provides resources to educators based on WWC products. Based on our survey, officials from 33 of 38 state education agencies that responded to our survey and an estimated 42 percent of school districts have heard of the WWC. Those states and school districts generally used the WWC to a small or moderate extent to inform decisions on effective practices. Based on our survey, states and school districts reported that they would likely increase their use of the WWC if it included a broader array of information or more timely information.

Contents

Letter		1
	Background	2
	WWC Reviews Research in Accordance with Accepted Standards and Has Responded to Recommendations and Criticisms	8
	WWC's Output and Costs Increased; However, IES Has Not Developed Adequate Performance Measures Related to Cost or Product Usefulness	17
	Education Has Three Primary Ways to Disseminate Information about WWC Products, but Awareness and Use Vary among Target Audiences	28
	Conclusions	40
	Recommendations for Executive Action	42
	Agency Comments and Our Evaluation	43
Appendix I	Objectives, Scope, and Methodology	46
Appendix II	Other Sources of Information Districts Use To Identify Effective Education Practices	60
Appendix III	IES and WWC Response to Expert Panel Recommendations	61
Appendix IV	Comments from the Department of Education	67
Appendix V	GAO Contact and Staff Acknowledgments	71
Related GAO Products		72
Tables		
	Table 1: Products and Registries Available on the WWC Web Site	3

Table 2: Two Study Designs That Meet the WWC Standards with or without Reservations	7
Table 3: New WWC Publications and Reports	19
Table 4: Task Category Definitions and Changes between Contracts	24
Table 5: Estimates and Confidence Intervals for Figure 8	56
Table 6: Estimates and Confidence Intervals for Figure 10	56
Table 7: Estimates and Confidence Intervals for Figure 12	57
Table 8: Estimates and Confidence Intervals for Figure 14	58
Table 9: Conferences Attended to Administer Questionnaires to Teachers and Principals	58

Figures

Figure 1: WWC Research Review Process for Interventions	6
Figure 2: Percentage of Interventions with Positive or Potentially Positive Ratings Categorized by the Amount of the Evidence Supporting Those Ratings	12
Figure 3: Studies Reviewed That Meet WWC Evidence Standards	14
Figure 4: Publication Quantities, by Contract Year (CY) for Current WWC Contract	18
Figure 5: Average Time for IES Peer Reviews of Released Intervention Reports and Quick Reviews, by Contract Year (CY) and Quarter (Q) for Current WWC Contract	21
Figure 6: IES Peer Review Backlog for Intervention Reports and Quick Reviews, by Contract Year (CY) and Quarter (Q) for Current WWC Contract	22
Figure 7: WWC Costs, by Task Categories and Contracts	25
Figure 8: Sources from Which District Officials Heard of the WWC	31
Figure 9: Extent to Which States Use WWC for Various Purposes	34
Figure 10: Extent to Which School Districts That Have Used the Clearinghouse Used It for Various Purposes	35
Figure 11: Extent to Which States Use Specific WWC Products	36
Figure 12: Extent of Specific Product Use among Districts That Use the Clearinghouse	37
Figure 13: Number of States That Reported They Would Likely Increase Their Use of WWC Given Certain Changes	39
Figure 14: Estimated Percent of School Districts That Have Accessed the WWC That Would Likely Increase Their Use of the WWC Given Various Changes	40
Figure 15: GAO's Web-based Survey of State Departments of Education and Local Educational Agencies in the 50 States and the District of Columbia	49

Abbreviations

AYP	adequate yearly progress
DWW	Doing What Works
Education	U.S. Department of Education
ESEA	Elementary and Secondary Education Act of 1965
IES	Institute of Education Sciences
LEA	local educational agency
Recovery Act	American Recovery and Reinvestment Act of 2009
REL	Regional Educational Laboratories
WWC or Clearinghouse	What Works Clearinghouse

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



United States Government Accountability Office
Washington, DC 20548

July 23, 2010

Congressional Committees

The U.S. Department of Education's What Works Clearinghouse (WWC or Clearinghouse) was established as a federal source of scientific evidence about "what works" in education. The Institute of Education Sciences (IES), a division of the U.S. Department of Education (Education), created the WWC in 2002, in part to help educators identify and use scientifically-based practices as specified in the Elementary and Secondary Education Act of 1965 (ESEA).¹ The WWC, which is operated by an independent contractor, conducts systematic reviews of education research and disseminates information on its Web site about the effectiveness of the practices reported in these research studies. Currently operating under a \$50 million 5-year contract, the Clearinghouse has generated criticism in the education research evaluation field on the timeliness of its reviews, its standards for study inclusion, and the methodological soundness of its research review process.²

An explanatory statement submitted in lieu of a conference report for the Omnibus Appropriations Act, 2009, directed GAO to examine how the WWC reviews education research and to address concerns about the operation, cost, and usefulness of the WWC.³ Specifically, GAO was required to determine whether the WWC review process met current standards for evaluating research and to examine the output and cost for completing reviews, the degree of consistency of review procedures across the various topics addressed, and the usefulness of the Clearinghouse for practicing educators. To conduct this work, we examined (1) the extent to which the WWC review process meets accepted standards for research evaluation and how the WWC has responded to recommendations and criticisms of its processes, (2) how the WWC's output and costs have changed over time and how IES

¹20 U.S.C. §§ 6301-7941. The mission and functions to be performed by IES are set out at 20 U.S.C. § 9511.

²This is the second 5-year contract for the Clearinghouse. The first contract for about \$27 million expired in 2007.

³H.R. Comm. on Appropriations, 111th Cong., Omnibus Appropriations Act, 2009: Comm. Print of the Comm. on Appropriations U.S. Representatives on H.R. 1105/Public Law 111-8, at 1483 (Comm. Print 2009).

measures WWC performance, and (3) how WWC products are disseminated and how useful education professionals find them to be.

To address all of our objectives, we interviewed and obtained information from IES officials and the current and former WWC contractors, as well as representatives from various educational organizations. In addition, to address objective 1, we reviewed a prior GAO report that examined WWC procedures and standards, an expert panel report that previously assessed the validity of the WWC review process, literature, and procedures used by other organizations that conduct systematic reviews of research. We also reviewed the Clearinghouse's response to the expert panel and to specific criticisms in education research literature. To determine how performance and costs changed over time (objective 2), we analyzed the costs and productivity of the WWC contractors by reviewing budget, expenditure, and performance data. For objective 3, we administered a Web-based survey to state education agencies in all 50 states and the District of Columbia and a nationally representative sample of school districts;⁴ interviewed IES's 10 Regional Educational Laboratories; and gathered nongeneralizable information from teachers and principals at four conferences. Appendix I explains our scope and methodology in more detail. We performed our work from September 2009 to July 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The mission of the WWC is to be a central source of scientific evidence for what works in education.⁵ To accomplish this, the WWC reviews existing education research and posts information based on its reviews on the WWC Web site, <http://ies.ed.gov/ncee/wwc/>.

The types of products currently available on the WWC Web site are described in table 1.

⁴Thirty-seven states and the District of Columbia and 74 percent of surveyed districts responded to our survey.

⁵WWC's mission is consistent with IES's broader mission to bring rigorous and relevant research, evaluation, and statistics to the nation's education system.

Table 1: Products and Registries Available on the WWC Web Site

Product	Description	Number	Example
Intervention reports	Summarize all of the research reviewed for a particular intervention within a topic area. Each report offers an overview of the intervention, summarizes all relevant research, and provides a rating of effectiveness. Studies featured in intervention reports must meet WWC evidence standards with or without reservations.	130	Accelerated Reader: WWC reviewed the evidence pertaining to the effectiveness of this specific curriculum with respect to certain reading outcomes
Practice guides	Contain recommendations for educators to address challenges in their classrooms. Assign strength of evidence ratings to each recommendation (strong, moderate, low). Rely to some extent on expert opinion.	12	Structuring Out-of-School Time to Improve Academic Achievement: WWC published general recommendations on how to design out-of-school time programs that will increase student learning
Quick reviews	Assess the quality of research evidence from single studies recently featured in the media to determine if they meet WWC evidence standards.	40	Recess and Classroom Behavior: WWC reviewed a study profiled in the news that examined whether providing daily recess to third graders improves their classroom behavior
Multimedia	Audio files, video files, presentations, and transcripts from WWC events.	N/A	Reducing Behavior Problems in the Elementary School Classroom: WWC held a webinar featuring a practice guide on this topic
Registry of evaluation researchers	An online database of researchers who conduct evaluations of the effectiveness of educational interventions to help schools, school districts, and educational program developers identify potential researchers.	N/A	Individual researchers and various organizations
Registry of randomized controlled trials	An online database of completed and in-progress randomized controlled trials in education. This resource is designed to help schools, school districts, and educational program developers identify research regarding the effectiveness of educational interventions.	N/A	A Randomized Trial of Two Promising Interventions for Students with Attention Problems: WWC included this randomized controlled trial in its registry

Source: GAO analysis of WWC information.

Note: This table summarizes the WWC products and registries available as of May 18, 2010. The Clearinghouse previously published topic reports summarizing findings from all studies on all relevant interventions for a particular topic, such as beginning reading. These reports were replaced by dynamically generated summaries of evidence.

In addition to the Clearinghouse, Education provides other technical assistance and research-related resources to assist states, districts, and schools. Examples of research-related resources include the Regional Educational Laboratories (REL) and the Doing What Works (DWW) Web site (<http://dww.ed.gov>):

-
- *Regional Educational Laboratories.* IES's Regional Educational Laboratory Program is a network of 10 laboratories that conduct research and provide policymakers and practitioners with expert advice, training, and technical assistance on how to interpret findings from scientifically valid research.⁶
 - *Doing What Works.* Led by Education's Office of Planning, Evaluation and Policy Development, DWW is a Web-based resource intended to help teachers, schools, districts, states and technical assistance providers implement research-based instructional practice.

Initial Years of the What Works Clearinghouse

In 2002, IES awarded a \$27 million 5-year contract to the initial contractors to operate the Clearinghouse.⁷ The WWC contractors developed the Clearinghouse's research review standards with IES and reviewed research related to topic areas considered to be pressing issues in education.⁸ One of the goals of the Clearinghouse was to promote informed education decision making through a Web-based dissemination system that featured rigorous reviews of studies on the effectiveness of educational interventions.

The WWC experienced a slow start due in part to the amount of work involved in developing a research review and reporting process that was valid, transparent, and replicable, according to the initial contractors. In developing the research review process, the contractors and IES addressed over 60 technical issues, such as determining what constitutes an acceptable level of participant loss (attrition) from a study and what methods should be in place to accommodate common education research techniques. In addition, initial plans for topic areas and reporting formats were modified. For example, IES decided to drop one planned topic area

⁶The current priority for the 2006-2010 REL contract period is providing policymakers and practitioners with expert advice, training, and technical assistance on how to interpret the latest findings from scientifically valid research pertaining to requirements of the ESEA.

⁷This contract was awarded to the American Institutes for Research and the Campbell Collaboration. In 2007, Education awarded the second 5-year contract to Mathematica Policy Research, Inc. to operate the WWC.

⁸The initial topic areas chosen in 2003 were: beginning reading, K-12 math achievement, dropout prevention, adult literacy, peer-assisted learning, reducing delinquency, and English language acquisition.

because IES officials determined it to be too broad.⁹ The WWC and IES also spent a substantial amount of time developing and refining a reporting format to communicate research results to a lay audience. As a result, the WWC began releasing reports in 2006. By September 2007, the WWC had released 89 intervention reports, six topic reports, and three practice guides.

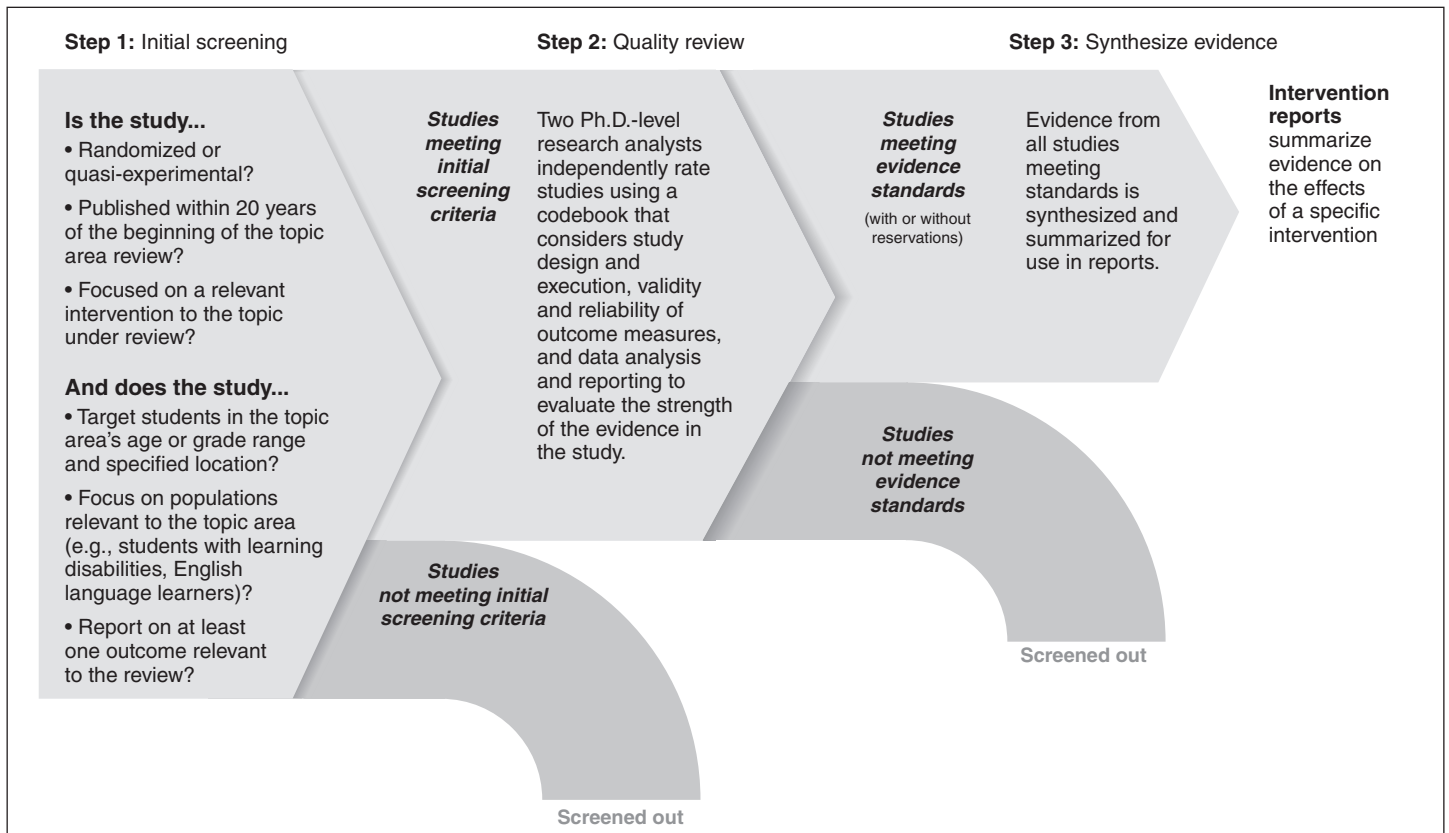
WWC Research Review Process for Intervention Reports

The WWC uses a three-step review process to assess the quality of studies and report on what the research indicates about the effectiveness of interventions. The WWC definition of interventions includes programs (such as whole school reform), products (such as a textbook or curriculum), practices (such as mixed-age grouping), or policies (such as class size reduction).¹⁰ The process begins with an initial screening of published and unpublished studies relevant to the intervention being reviewed. Studies are collected from electronic databases, journals, conference proceedings, and nominations solicited from the general public. The studies that pass initial screens are reviewed to determine whether they provide valid evidence of an intervention's effectiveness. Using these studies, the WWC then synthesizes the evidence about the effectiveness of an intervention and publishes a report describing its findings. The Clearinghouse categorizes interventions as either having positive effects, potentially positive effects, mixed effects, no discernable effects, potentially negative effects, or negative effects (see fig. 1).

⁹IES dropped the peer-assisted learning topic area, which would have covered interventions related to students learning with and from other students—generally in the same class and at a similar academic level.

¹⁰The WWC intervention reports primarily focus on branded products.

Figure 1: WWC Research Review Process for Interventions



Source: GAO analysis of WWC guidelines.

The WWC uses evidence standards to assess the strengths and weaknesses of a study's methodology, such as the type of design it uses, the quality of the study's data, and the appropriateness of the study's statistical procedures. Until recently, the WWC accepted two types of study designs—randomized experiments and quasi-experimental studies.¹¹ Only randomized controlled trials (or randomized experiments) that WWC has determined to be well-designed and well-implemented are considered strong evidence and can receive the highest rating of “meets evidence standards without reservations.” The WWC also considers evidence from quasi-experiments it has determined to be well-designed and well-

¹¹In June 2010 IES made public its standards for two additional study designs: regression discontinuity and single case design studies.

implemented. The highest rating a study using quasi-experimental design can receive is “meets evidence standards with reservations.” This rating category is intended to inform educators to interpret the study results with caution, as the results may reflect other factors, in addition to the impact of the intervention (see table 2).

Table 2: Two Study Designs That Meet the WWC Standards with or without Reservations

Study design	Description	Highest rating category WWC will assign if well-conducted, and why
Randomized control-group experiments	Compare the outcomes of groups that were randomly assigned either to the intervention group or to a nonparticipating control group before the intervention. Such an assignment helps ensure that any differences in outcomes can be attributed to the intervention.	Meets evidence standards: Considers randomized experiments as the design that is most likely to yield unbiased estimates of a program’s impact on student outcomes.
Comparison-group quasi-experiments	Compare the outcomes of groups in which individuals are assigned to an intervention or control group in a way that minimizes observable differences between the groups that could affect outcomes. The researcher must demonstrate that the groups are equivalent on observable participant characteristics, such as age, grade level, prior academic achievement, or pretest results.	Meets evidence standards with reservations: Even with equivalent observable characteristics, there may be differences in other participant characteristics related to the desired outcomes—for example, certain family or social structures that are unknown to the researcher.

Source: GAO analysis of WWC information.

IES Oversight and Support of the WWC

The WWC is administered by IES through a contract with a private research organization. IES monitors implementation of the specific tasks detailed in the WWC contract by reviewing an annual work plan and monthly performance and expenditure reports submitted by the contractor. IES tracks implementation of the tasks, completion of performance goals, and adherence to the budget outlined in the contractor

work plan.¹² The contractor monitors the work of any subcontractors that it uses to perform services such as research reviews, technological support, and communications support.

IES is also involved in the development and dissemination of WWC products. IES reviews and approves proposed topics for WWC products, product formats, and the research review procedures. It also coordinates a group of independent researchers to peer review WWC products and reviews and approves all WWC products prior to public release. IES required the contractor to develop a communications plan to inform WWC customers about features of the Web site.

WWC Reviews Research in Accordance with Accepted Standards and Has Responded to Recommendations and Criticisms

WWC Follows Accepted Review Standards and Is Improving Its Review Process in Response to a Congressionally Mandated Expert Panel Report

We found that the WWC review process follows generally accepted practices for reviewing research. Specifically, GAO's November 2009 report reviewing federally supported efforts to identify effective interventions found that the WWC determines whether a study provides credible evidence on effectiveness based on several dimensions, including the quality of the research design, how the study was implemented, and other technical considerations.¹³ Our 2009 report also noted that WWC follows a common approach to conducting its reviews,¹⁴ and provides

¹²IES uses some of this information to determine a performance-based award for the contractor.

¹³GAO, *Program Evaluation: A Variety of Rigorous Methods Can Help Identify Effective Interventions*, GAO-10-30 (Washington, D.C.: Nov. 23, 2009).

¹⁴For example, WWC rates the credibility of a study's evidence along a continuum.

information to help educators understand the body of existing research on specific interventions.¹⁵

Additionally, a congressionally mandated panel of experts found in October 2008 that WWC's research review process was based on appropriate methods for judging the strength of the evidence regarding the effectiveness of interventions.¹⁶ For example, the panel agreed that the minimum qualifications a study must meet in order to be reviewed by the WWC are appropriate. The panel also found that WWC's reporting process is reasonable and that the WWC provides succinct and relevant evidence on the effectiveness of education interventions. While the panel concluded that the WWC's processes are generally appropriate, the panel made several recommendations to the WWC for continued improvement. The recommendations primarily related to establishing or clarifying procedures, reviewing statistical methods, and documenting the screening process.

¹⁵To help educators understand the research behind a WWC report, the WWC (1) combines information on the size and number of studies reviewed to rate the extent of evidence as small or medium/large; (2) includes an overall rating of effectiveness on each measured outcome, which combines the size and direction of effects, statistical significance, and the quality of the research designs; and (3) reports the average improvement index across studies as the expected change in percentile rank for an average control group student if the student had received the intervention.

¹⁶H. Brown, D. Card, K. Dickersin, J. Greenhouse, J. Kling, and J. Littell, *Expert Report on the What Works Clearinghouse*, a report prepared by the National Board for Education Sciences, 2008. The expert panel was convened by the National Board for Education Sciences in 2008 in response to the Senate Appropriations Committee. S. Rep. No. 110-410 at 228-29. The National Board for Education Sciences, consisting of 15 voting members appointed by the President with the advice and consent of the Senate, provides IES guidance and oversight. 20 U.S.C. § 9516. The mandate directed the Board to convene leading experts in rigorous evaluations to assess the WWC, specified that panel members should be free of conflicts of interest and that a report with any recommendations was to be submitted within 4 months. Expert panel members included economists, statisticians, and professors with expertise in other systematic review efforts in the fields of health care, and social policy.

The WWC implemented or is considering implementing 14 of the panel's 17 recommendations.¹⁷ The WWC implemented nine recommendations, in part by modifying some procedures and creating a procedures and standards handbook.¹⁸ For example, in response to the panel's recommendation that the WWC include a table of study dispositions (e.g., whether studies meet WWC evidence standards) at the front of intervention reports, the WWC is modifying the report template to include a summary table along with the existing listing of dispositions in the reference section. The WWC also addressed panel concerns about technical issues in its review process by making its treatment of study attrition—the rate at which subjects drop out of a study—more consistent across topic areas. The panel noted that the WWC's practice of determining acceptable attrition levels by topic area led to arbitrary inconsistencies across the topic areas. In response to the panel's recommendation that the WWC reconsider this practice, the WWC took steps to increase its consistency by developing attrition guidance that applies to all topic areas.¹⁹ (See app. III for a table detailing the recommendations, WWC and IES's response, and the status of any changes made in response to recommendations.)

In addition, the WWC is considering implementing five other panel recommendations. For example, the panel raised concerns that the WWC does not document some potential conflicts of interest for the studies it reviews. In response to this concern, the WWC is considering tracking and

¹⁷The WWC considered but is not implementing three of the panel's recommendations. One recommendation suggested the WWC develop standards for documenting the program received by the comparison group that did not receive the intervention and potentially incorporating this information when making comparisons across studies and/or interventions. The other two related to WWC procedures for combining evidence across studies and asking study authors to reanalyze their data to correct a common error associated with the use of classrooms rather than individual students in data analysis. This mismatch can result in an overstatement of the statistical significance of the effects of the intervention. The WWC maintains that its current procedures are consistent with standard practices and has elected not to ask authors to reanalyze their data. See appendix III for more detail.

¹⁸The handbook documents the actions that WWC staff must take when reviewing research and the items that must be included in the reports, among other things. It is available at http://ies.ed.gov/ncee/wwc/pdf/wwc_procedures_v2_standards_handbook.pdf.

¹⁹WWC requires reviewers to select one of two levels of attrition (higher or lower) depending on the topic area and context. WWC allows a higher level of attrition for topic areas in which it assumes that attrition is due to factors that are not strongly related to the intervention. WWC allows a lower level of attrition for topic areas in which attrition may be due to certain individuals choosing not to participate in the intervention.

publishing whether studies of a program are funded or conducted by the program's developers.²⁰ Further, in response to the panel's concern that the WWC's screening process may exclude some eligible studies, the WWC is undertaking an evaluation of the reliability of its screening process. According to IES officials, they will postpone decisions about the recommendations until the newly appointed Commissioner for the WWC is on board and actively involved in the decision making.

WWC Also Responded to Criticism That It Produces Limited and Potentially Misleading Information

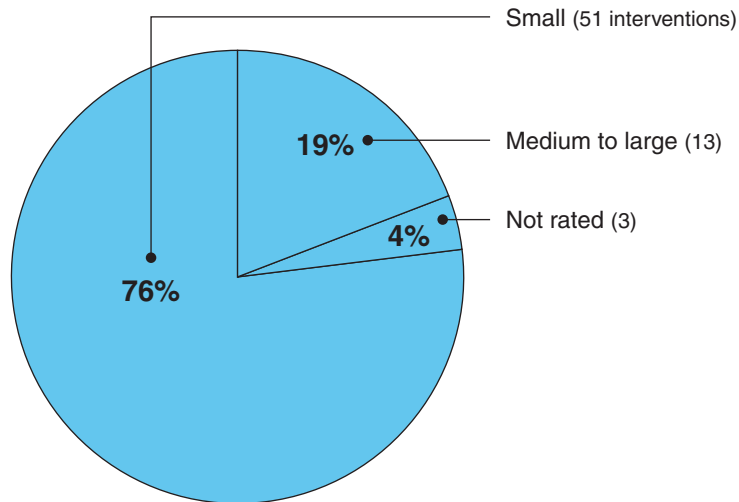
Some researchers claim that the WWC presents potentially misleading information by including brief experiments involving small numbers of students when evaluating interventions.²¹ As a result, according to critics, educators may accept the WWC's rating of the intervention's effectiveness, even though the evidence behind the rating is limited. One researcher suggested the WWC emphasize larger studies that span significant periods of time and set a minimum sample size requirement. According to WWC staff, such changes would exclude valuable research and prevent the WWC from providing educators with research-based information about some interventions.²² Instead of changing its treatment of sample size and study duration, the WWC began publishing information on the extent of the evidence supporting its findings in 2007. The WWC's "extent of evidence" rating alerts educators when the WWC effectiveness ratings are based on a small amount of evidence. As figure 2 shows, 76 percent of interventions with positive or potentially positive ratings of effectiveness are based on a small amount of evidence (see fig. 2).

²⁰In cases in which a study of a program is funded by the program developer, the study authors may have incentives to find positive effects of the program. Such incentives could call the validity of the study's results into question.

²¹For example, see Robert Slavin and Dewi Smith, "The Relationship Between Sample Sizes and Effect Sizes in Systematic Reviews in Education," *Educational Evaluation and Policy Analysis*, vol. 31, no. 4 (2009): 500-506.

²²WWC staff also contend that there is no statistical basis for setting a minimum sample size and doing so would arbitrarily ignore available evidence and potentially bias the findings of a systematic review.

Figure 2: Percentage of Interventions with Positive or Potentially Positive Ratings Categorized by the Amount of the Evidence Supporting Those Ratings



Source: GAO analysis of WWC data.

Note: The figure excludes seven interventions that were rated with different amounts of evidence as of April 27, 2010. Currently, the extent of evidence rating has two categories: small and medium to large. A rating of “medium to large” requires at least two studies and two schools across studies and a total sample size across studies of at least 350 students or 14 classrooms. Otherwise, the rating is “small.”

Further, researchers suggested that the WWC presents misleading information by rating interventions based on studies in which measures of student performance closely match the content taught to the intervention group, but not the control group.²³ In such studies, higher test scores among the intervention group may not accurately represent the effectiveness of the intervention more generally. The researchers suggested that the WWC exclude such measures, or at least report on them separately. However, the WWC includes these measures because, according to IES officials, they answer questions about whether different interventions lead to different content knowledge. The WWC agrees that there is a concern regarding the reliability of outcome measures that are overly similar to the intervention, but maintains that WWC procedures attempt to exclude such measures. In addition, in response to researcher

²³Robert E. Slavin and Nancy A. Madden, “Measures Inherent to Treatments in Program Effectiveness Reviews,” paper presented at the annual meetings of the Society for Research on Effective Education, Crystal City, Virginia, March 3-4, 2008; and Robert E. Slavin, “What Works? Issues in Synthesizing Educational Program Evaluations,” *Educational Researcher*, vol. 37, no. 1 (Jan./Feb. 2008): 5.

concerns that tests created by intervention developers may be biased,²⁴ the WWC added information to the intervention reports noting whether outcome measures are based on tests created by the developer.

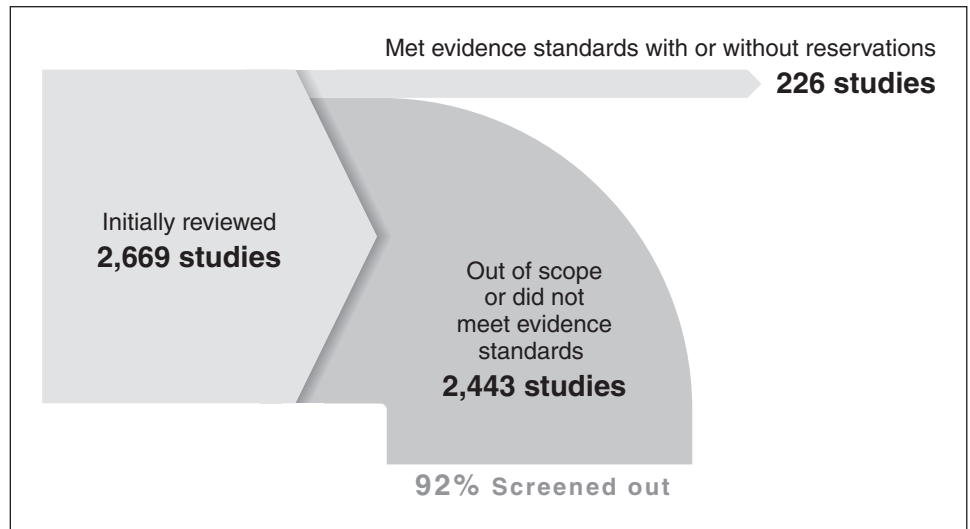
Some researchers and education professionals we interviewed suggested that the WWC produces limited information because its screening criteria are too restrictive—currently screening out about 90 percent of studies initially identified as potentially relevant (see fig. 3). Until recently, the WWC reviewed only two types of study designs—randomized experiments and quasi-experimental studies—and according to critics, this limited the amount and type of information available to educators.²⁵ For example, staff from one REL noted that educators may not be able to find reviews of the interventions they are using or considering because so few studies meet WWC standards.²⁶ Staff from another REL told us that if educators cannot find relevant and useful information, they may be discouraged from using evidence-based practices. Staff from a third lab noted that the narrow focus prevents educators from learning from less rigorous but nonetheless useful research, such as case studies describing an intervention’s costs and implementation requirements.

²⁴Intervention developers may intentionally or unintentionally create a test that is more likely to favor the intervention because they have financial or other interests in the success of the intervention.

²⁵While randomized control trials and quasi-experiments are considered to be rigorous approaches in assessing program effectiveness, they are not the only rigorous research designs available and may not always be appropriate. For example, such comparison group designs may not be appropriate for research on small numbers of students receiving special education services in a self-contained classroom. In such a case, an in-depth case study may be more appropriate. Examples of other research methods include statistical analyses of observational data, such as student records, or analyses of surveys of an intervention’s participants.

²⁶The WWC produces intervention reports noting when no studies meet standards.

Figure 3: Studies Reviewed That Meet WWC Evidence Standards



Source: GAO analysis of WWC data.

The WWC maintains that its screening criteria and study inclusion standards focus on studies that provide strong evidence of an intervention’s effectiveness, and lowering these standards could undermine the validity of the findings reported by the WWC. Although the Clearinghouse screens out most studies, many of its reports have identified interventions with positive effects. Data from the contractor indicate that 58 percent of WWC’s intervention reports identify positive or potentially positive effects of interventions. While the WWC plans to continue using its methodological standards for reviewing randomized and quasi-experimental studies, the Clearinghouse acknowledges that the emphasis on randomized experiments and quasi-experiments can exclude useful information on interventions in certain topic areas, such as special education, that do not lend themselves to these study designs. The WWC created new standards to include additional study designs.²⁷

²⁷Specifically, the WWC developed standards—which were made publicly available in June 2010—for reviewing single-case and regression discontinuity designs. The WWC anticipates reviewing many studies with single-case designs—studies that involve repeated measurement of a single subject (e.g., a student or a classroom)—as it evaluates interventions for special education. Regression discontinuity designs compare outcomes for a treatment and control group that are formed based on the results of a preintervention measure.

The WWC also introduced practice guides in 2007 in response to criticisms that its intervention reviews exclude too much research and consequently provide limited information to educators. Written by a panel of experts, practice guides include recommendations for educators on various topics, such as reducing high school drop-out rates and reducing behavioral problems in the classroom.²⁸ Whereas WWC's intervention reviews are based entirely on studies that meet WWC evidence standards, practice guides also incorporate studies that do not have designs that are eligible for WWC review, or in some cases, are reviewed and do not meet WWC evidence standards, and include the views of experts. To develop recommendations, the practice guide panel reviews available literature about the particular topic and then meets several times to discuss the topic. Through consensus, the panel identifies effective practices based on the evidence. Once the practice guide is developed, it undergoes a quality assurance review by WWC and IES staff and external peer review. The following text box provides an example of practice guide recommendations and the level of evidence supporting them.

²⁸The WWC has published 12 practice guides as of May 2010. The topics of these 12 practice guides are using data to support decision making, helping students navigate the path to college, structuring out-of-school time, assisting students in math, assisting students in reading, reducing behavior problems, dropout prevention, improving literacy, turning around low-performing schools, instruction for English language learners, encouraging girls in math and science, and organizing instruction and study.

Example of Practice Guide Recommendations and Evidence Levels^a

In 2009, the WWC published a practice guide to help educators assist students struggling with reading in the primary grades. The practice guide authors used an early detection and prevention framework known as Response to Intervention. The panel that authored the practice guide consisted of six researchers and one expert in implementation of the Response to Intervention model. Two WWC staff also assisted in the practice guide development.

The panel's recommendations follow.

Recommendation	Basis for recommendation	Level of evidence ^b
Screen all students for potential reading problems twice per year and monitor those with higher risk	Numerous studies with designs that did not meet WWC evidence standards or that did not use samples that adequately resembled the population of interest	Moderate
Provide time for differentiated reading instruction for all students based on assessments of students' current reading level	One descriptive study and expert opinion	Low
Provide intensive, systematic instruction on foundational reading skills in small groups to students who score below the benchmark score	11 studies that met WWC evidence standards	Strong
Monitor the progress of these students at least once a month	3 studies that met WWC evidence standards, but did not evaluate the effectiveness of monitoring so no conclusive inferences could be made, and expert opinion	Low
Provide intensive interaction on a daily basis to students who show minimal progress after reasonable time in small group instruction	5 studies that met WWC evidence standards but did not report statistically significant impacts on reading outcomes	Low

Source: GAO review of a WWC practice guide.

^aA strong rating indicates that studies supporting the recommendation generally meet WWC standards. A moderate rating indicates that studies supporting the recommendation generally meet WWC standards with reservations. A low rating indicates the recommendation is based on expert opinion, derived from theory or experience, and supported with evidence that does not rise to the moderate or strong levels.

^bOur analysis of practice guide recommendations found that almost half of the 67 recommendations made in the 12 practice guides released as of May 2010 were based on a low level of evidence.

WWC's Output and Costs Increased; However, IES Has Not Developed Adequate Performance Measures Related to Cost or Product Usefulness

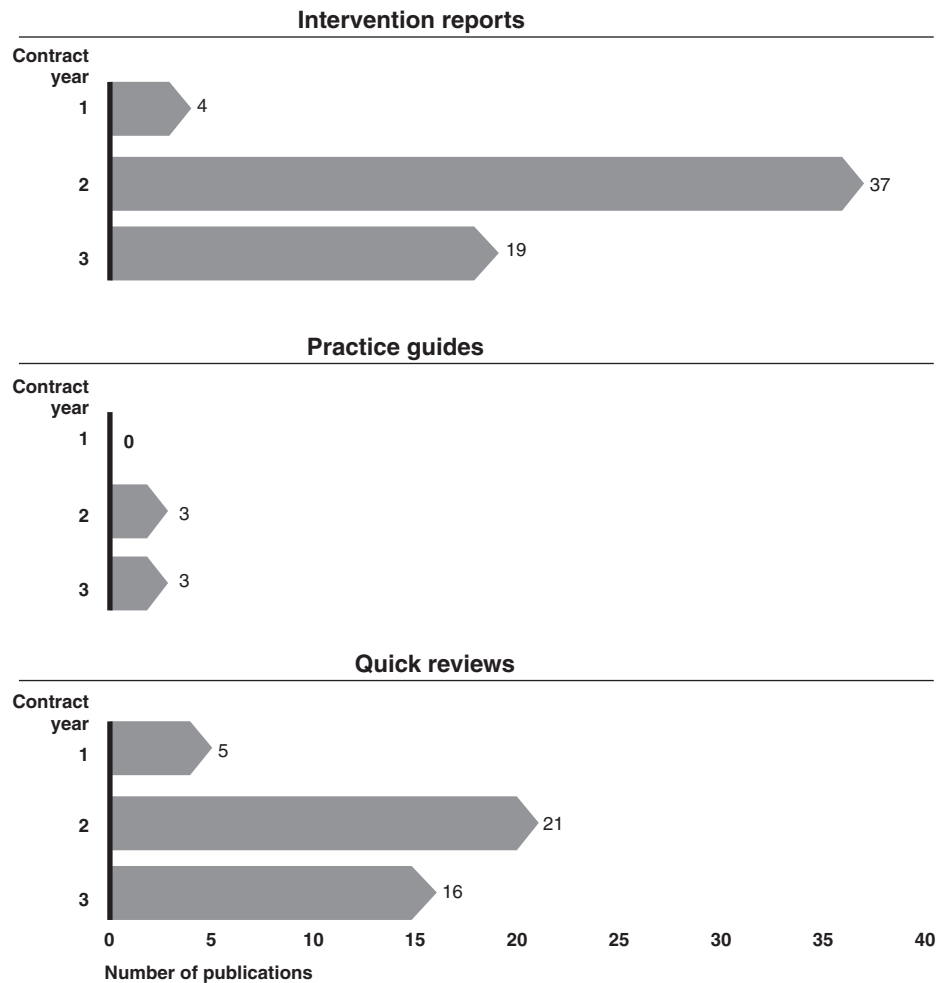
WWC Increased Output and Introduced New Products

WWC's report output increased under the current contract, and its scope expanded to include new products and processes to support production. Under the current contract, the WWC increased its total number of publications from the first contract year to the second contract year and generally kept pace with its increased scope, as specified in the Clearinghouse's annual plans.²⁹ For example, the current contract calls for the WWC to increase the number of topic areas and intervention reports. Under the current contract, the WWC added three new topic areas and released 60 intervention reports, including 5 in the new topic areas as of June 2010.³⁰ In addition, the WWC produces practice guides and quick reviews and increased its production of both of these products between the first and second year of the current contract. Figure 4 shows the production of all three WWC products as of June 30, 2010, the end of the third contract year.

²⁹IES requires the contractor to file WWC annual plans that outline planned product releases and other deliverables. IES and the contractor update these plans once a year with revised estimates.

³⁰Under the first contract (2002 to 2007), the WWC released 89 intervention reports, six topic reports, and three practice guides.

Figure 4: Publication Quantities, by Contract Year (CY) for Current WWC Contract



Source: GAO analysis of WWC data.

Notes: CY is July 1 to June 30. CY1 covers this period for 2007 to 2008, CY2 for 2008 to 2009, and CY3 for 2009 to 2010.

The WWC's scope of work increased under the current contract with the addition of new products and work processes, as well as responsibilities related to the American Recovery and Reinvestment Act of 2009 (Recovery Act), which provided additional innovation and improvement funding.³¹ The WWC is developing three new types of publications and conducts an

³¹Pub. L. No.111-5, 123 Stat. 115, 182.

annual review of Education-sponsored studies for IES's internal use. Specifically, the WWC is developing research briefs, research perspectives, and practice briefs, which will focus on Education policy priorities. Like practice guides, the new publications will incorporate expert opinion and a broad range of research. Table 3 provides more information on these new initiatives.³²

Table 3: New WWC Publications and Reports

Product	Description	Status
Research briefs	Short summaries of what research indicates about the effectiveness and implementation challenges of policies, practices, or issues in education.	In process and template has been approved. First publications projected for release in 2010.
Research perspectives	Researchers' perspectives on what research has found will work in addressing pressing educational issues. Topics will initially focus on issues relevant to the Recovery Act.	In process and template has been approved. First publications projected for release in 2010.
Practice briefs	Provide explicit information on how to implement one practice from a WWC practice guide, and provides educators with research-based, how-to steps and strategies for overcoming roadblocks, and tools for educators.	Template has been drafted but further work on this product is on hold pending direction from IES.
Reviews of IES-sponsored studies (annual)	IES uses this report to evaluate the research it funds. WWC reviews this research using WWC standards and reports on whether the research studies identify effective or promising practices.	First produced in 2008, with plans for annual reporting to IES.

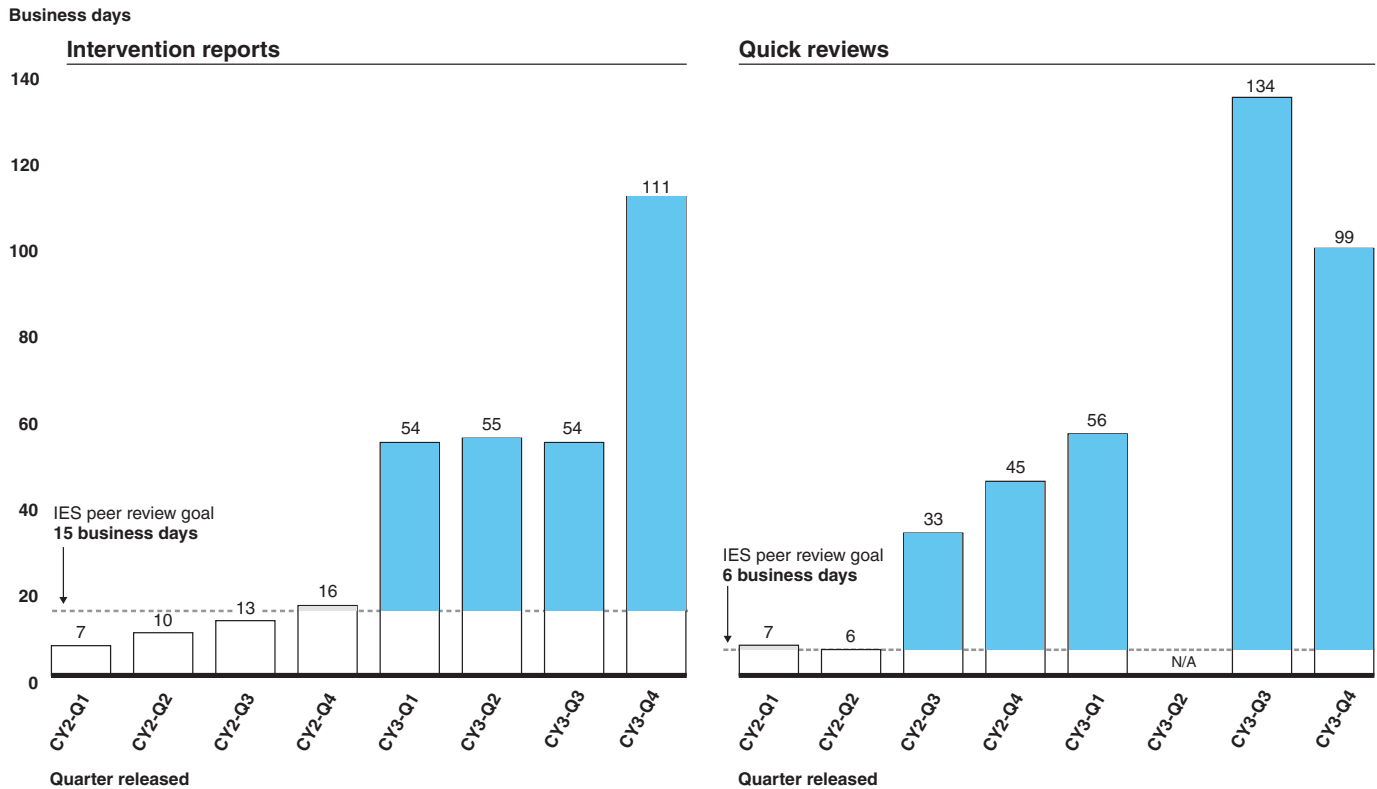
Source: GAO review of WWC contracts and annual plans.

³²The current contract also requires WWC to create and maintain other resources on its Web site, such as registries of researchers and randomized trials and the *WWC Policy and Procedures Handbook*. IES noted that these deliverables are either new or significantly enhanced from those produced under the first WWC contract.

IES's Reviews Have Delayed the Release of Some Reports

While the WWC contractor increased its report production, IES's review process did not keep pace with output. IES is responsible for administering independent peer reviews of all products and conducting final reviews and approvals before products are released, and has internal time frame estimates used in scheduling and completing such reviews. For example, according to IES planning documents, IES estimates 15 business days for the completion of peer reviews for intervention reports and 6 business days for WWC quick reviews. However, throughout 2009, IES took increasingly more time to schedule and coordinate the completion of peer reviews for some intervention reports and quick reviews. As a result, the release of 20 reports—11 intervention reports and nine quick reviews—was delayed by more than 6 months. For example, in the first quarter of the current contract year (third contract year, 2009 to 2010), IES took an average of over 50 business days to have intervention reports and quick reviews peer reviewed, compared to an average of 7 business days during the first quarter of second contract year (see fig. 5).

Figure 5: Average Time for IES Peer Reviews of Released Intervention Reports and Quick Reviews, by Contract Year (CY) and Quarter (Q) for Current WWC Contract

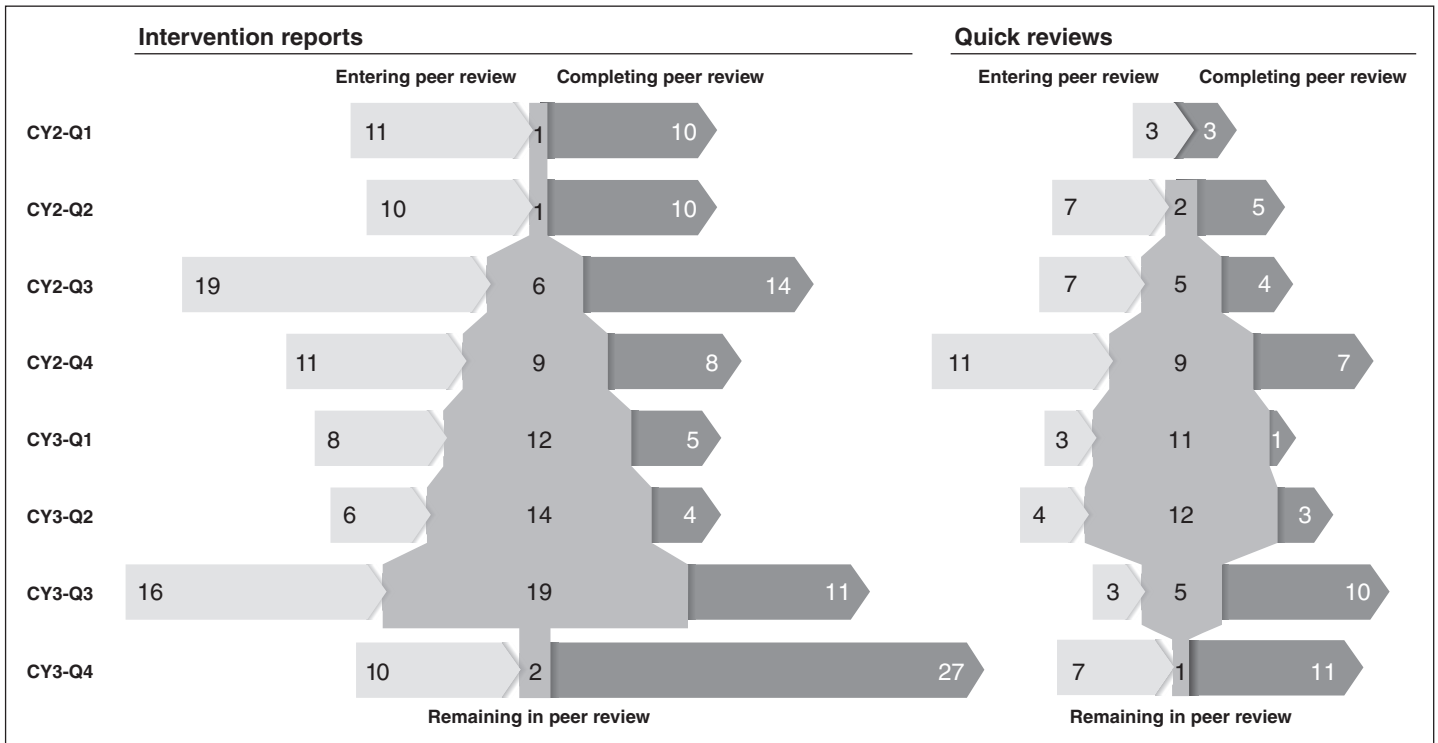


Source: GAO analysis of WWC data.

Notes: CY is July 1 to June 30. CY1 covers this period for 2007 to 2008, CY2 for 2008 to 2009, and CY3 for 2009 to 2010. In CY3-Q2, no quick reviews were released.

These delays in the IES-administered peer review process resulted in significant backlogs of intervention reports and quick reviews awaiting release. For example, as shown in figure 6, reports that entered the peer review process in the first quarter of the second contract year (CY2-Q1) were completed within that quarter. However, the majority of reports entering review the first quarter of the third contract year (CY3-Q1) remained in process for subsequent quarters. While the backlog persisted through the third quarter of the third contract year (CY3-Q3), the number of reports that completed peer review in the third and fourth quarters increased from prior quarters. Figure 6 shows that 11 intervention reports completed peer review in CY3-Q3 and an additional 27 completed peer review in CY3-Q4, compared with 4, 5, and 8 intervention reports in the prior three quarters.

Figure 6: IES Peer Review Backlog for Intervention Reports and Quick Reviews, by Contract Year (CY) and Quarter (Q) for Current WWC Contract



Source: GAO analysis of WWC data.

Notes: CY is July 1 to June 30. CY1 covers this period for 2007 to 2008, CY2 for 2008 to 2009, and CY3 for 2009 to 2010. At the end of each quarter, any report remaining in peer review would carry over to the next quarter. For example, for intervention reports in CY2-Q3, 19 new reports entered peer review, joining the 1 report that remained from the previous quarter. Fourteen of these 20 reports completed peer review, and 6 remained.

IES attributed these delays to several factors and recently took steps to eliminate the backlog. IES officials told us that delays were, in part, attributable to difficulty in identifying and scheduling independent peer reviewers, vacancies in WWC-related positions at IES, and an increasing amount of research that met WWC standards.³³ For example, IES officials told us identifying and scheduling a sufficient number of qualified, independent peer reviewers had become increasingly difficult because

³³ IES indicated that the amount of research available meeting WWC inclusion standards for a given report varied and had an impact on the number of staff hours required in the production of reports. Reports based on larger numbers of studies took more staff hours to complete than those based on less available evidence.

several former peer reviewers were now associated in some way with the WWC and therefore were no longer independent. To reduce the delays and eliminate the backlog, IES recently implemented a new database to help staff track and manage the work of peer reviewers and other WWC-related tasks. IES officials also told us that they began identifying additional potential peer reviewers using the WWC online registry of researchers. In addition, IES increased a staff member's responsibilities related to scheduling and coordinating peer reviews. These efforts reduced the amount of time reports remain in the IES peer review process and eliminated the backlog as of June 2010.³⁴

In addition to delays in the peer review process, WWC contractors told us that many of their daily decisions need IES approval, and slow responses delayed contractor processes. For example, the contractor needs IES approval on the format and content of the products in development, hindering further work when responses are delayed. IES officials acknowledged that some delays in the approval process occurred during contract year three and told us that this was largely due to staff vacancies that they anticipate filling.

The Cost of the Current WWC Contract Has Increased from the Previous One

WWC's contracted costs have doubled from about \$5.3 million per year under the previous 5-year contract to the current level of about \$10.7 million per year.³⁵ The increase in contracted costs reflects the expanded scope—more publications and new products and processes—of the second contract compared to the first. IES's contract for the WWC includes a variety of tasks that the contractor is responsible for, including tasks related to report production and product development. Table 4 provides a description of six broad task categories and how they changed between contracts.

³⁴We discussed the backlog and its causes with IES officials in February and May 2010. For the first six months of 2010, IES completed the review of 59 report products (intervention reports and quick reviews)—compared to 46 for the entirety of calendar year 2009—thus eliminating the backlog.

³⁵IES also spends about \$200,000 per year on noncontracted WWC expenses—including internal salaries, independent peer review honorariums, and Web site support—which have not changed significantly between the two 5-year contracts. In addition, three practice guides were completed outside of the WWC contract, at a total cost of about \$319,000. IES noted that these preliminary guides were produced through a less thorough process than the current process.

Table 4: Task Category Definitions and Changes between Contracts

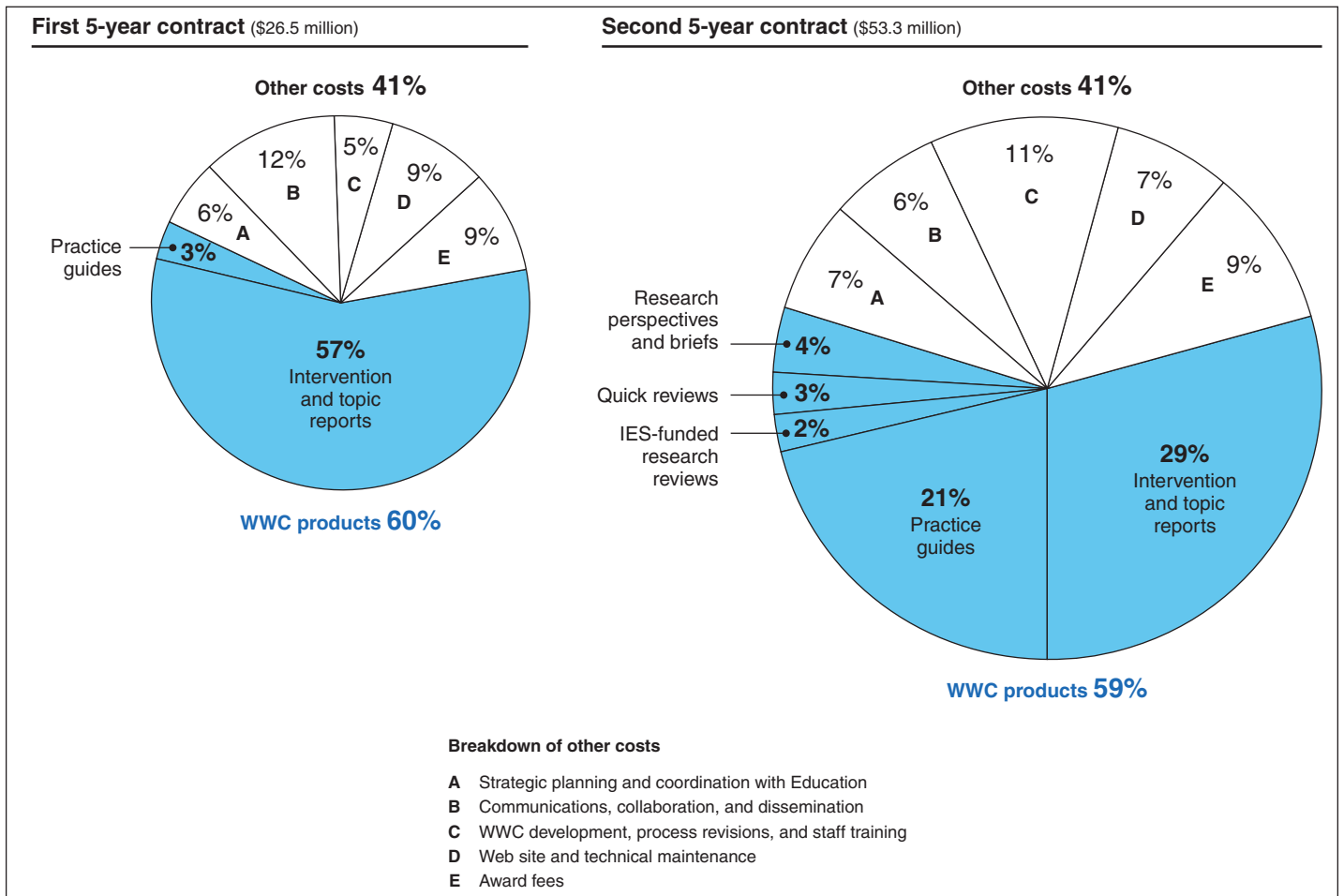
Task category	Task category includes expenditures related to:	Changes from first contract to current contract
WWC products	Conducting research reviews and developing and publishing WWC products	New product types, expanded practice guide review process Stopped producing topic reports (2008)
Strategic planning and coordination with IES	Preparing annual plans, managing reporting requirements, and communications and workflow with IES	New contractor database increased process documentation and reporting capabilities to IES
Communications, collaboration, and dissemination of WWC products	Maintaining WWC Help Desk Promoting WWC through various means Developing/implementing a communications/dissemination plan	WWC staff attend conferences and coordinate some dissemination efforts with other IES departments in the current contract
WWC development, process revisions, and maintenance	Revising and developing review processes and policies Administrating and supporting technical staff training, technical advisory group, online registries, and conflict of interest procedures	Enhanced review processes and standards, added new research designs Developed policy and procedures handbooks, new products, and staff training
Web site and technical maintenance	Coordinating content, maintaining databases/search functions, and processing federal data collection forms	New online searchable system and database
Award fees	Fixed and performance-based contractor award fees based on a percentage of the overall contract total	No change

Source: GAO review of WWC contracts, annual plans, and budget documents.

Our analyses of costs associated with these six broad task categories shows that the proportion of funds dedicated to producing WWC reports was about 60 percent under both contracts (see fig. 7).³⁶

³⁶Both contractors dedicated the same proportion of funds to WWC products. The first contractor primarily published products in the final year of the first contract (2007); however, products were produced, reviewed, and modified—but not published—prior to that year. As a result, despite limited publication in the first 4 years, a large portion of the first contractor’s expenditures were designated for direct product costs.

Figure 7: WWC Costs, by Task Categories and Contracts



Source: GAO analysis of WWC budget data.

Notes: Figures reflect actual expenditures for the first 5-year contract and updated budgeted expenditures for the current 5-year contract, which began on July 1, 2007. Percentages do not add to 100% due to rounding. Total WWC expenditures for the first 5-year contract were about \$26,527,760, but cost category percentages do not reflect \$1,222,714 billed by a co-contractor but not itemized by task. Category proportions for the first contract are estimates because IES could not provide documentation that included final adjusted expenditures by tasks. The WWC budget is \$53,315,166 for the current 5-year contract, of which \$23,643,891 had been spent as of October 31, 2009. Cost category proportions for the current contract do not include \$104,559 related to transition from the first contract to the second contract.

The proportion of funds dedicated to some tasks changed from the first contract to the second. For example, costs for tasks related to process development and revisions doubled from 5 percent to 11 percent, supporting various activities such as expanding the practice guide review

process and revising the Clearinghouse's procedures and standards handbook. According to IES officials, the current WWC contractor developed and implemented new or enhanced processes that affect all publications and deliverables. For example, the current contractor developed a standardized system for conducting and recording the WWC's searches of research studies.³⁷

Most WWC cost increases supported additional output and expansions in product scope. While under both contracts more resources were devoted to intervention reports than any other product, the proportion devoted to practice guides increased significantly, currently comprising about 21 percent of total budgeted costs. IES noted that practice guides were only added during the last year of the prior contract, but are now a primary product. Other new WWC products make up a relatively small proportion of budgeted costs in the current contract, representing about 9 percent of the total contract budget combined.

IES Has Not Developed Performance Measures Related to Production Costs or Product Usefulness

IES established performance goals, which the WWC met or exceeded; however, these goals do not address production costs or the usefulness of WWC products. IES established WWC-related performance goals in its annual organizational assessment, but Education discontinued the use of these performance measures for fiscal year 2010.³⁸ In addition, IES established performance goals for its WWC contractor in the contractor award fee plan, which IES uses to determine the amount of performance-based funds awarded to the contractor.³⁹

³⁷According to WWC staff, this system allows them to use results from prior literature searches for related topics, rather than conducting new searches. The current contractor also designed and implemented standardized training for staff and subcontractors who evaluate research. All WWC research evaluators complete 2 days of training; are tested on WWC products, review standards, and policy; and have initial reviews with monitored before working independently.

³⁸The Organizational Assessment—Education's performance management system—was developed in response to the requirements of Executive Order 13450, *Improving Government Program Performance*, as well as the Office of Personnel Management's requirement that each federal agency evaluate its principal offices on an annual basis.

³⁹The contract award fee plan includes performance measures related to production, business management of the contract, and timeliness. Business management of the contract includes cost management, business relationships, efforts to meet small business subcontracting goals, and accurate billing. These measures are linked to work specified in the WWC contract and annual plans.

IES measured WWC program performance from fiscal year 2003 to fiscal year 2009, as part of Education's Organizational Assessment—its departmentwide performance management system. The WWC-related performance goals included in Education's Organizational Assessment focused on WWC Web site visits and the quantity of publications, both of which were areas of concern as the WWC was getting established.⁴⁰ Specifically, these performance goals included increased WWC Web site visits, sustained productivity in the release of intervention reports and quick reviews, and increased practice guide production. The WWC met or exceeded these performance goals annually; however, according to IES officials, these performance goals will not be included in Education's fiscal year 2010 Organizational Assessment, in part because IES is now satisfied with WWC activity in these areas.⁴¹

IES has not developed performance measures related to the cost of specific WWC products.⁴² IES officials noted that the costs per WWC publication vary greatly depending on the amount of available research relevant to the specifications of a product. For example, intervention reports based on a large number of studies meeting WWC standards take longer and cost more to produce than do reports for which few studies qualify for review. IES has tasked the current WWC contractor to develop ways to streamline production processes and to conduct a cost study, the results of which would improve budget estimates and strengthen IES's monitoring of the contract. While the contractor has begun this work, IES officials told us that they do not know when cost-related performance measures, such as acceptable cost ranges for each type of product, will be established.

WWC does not currently have a performance measure related to product usefulness. While Web site visits were tracked as a measure of WWC utilization in IES's Organizational Assessment through fiscal year 2009, this metric did not assess the degree to which WWC products were reaching their target audience and did not provide any information on the

⁴⁰While the WWC annually exceeded performance targets, it is difficult to interpret these results as the performance measures changed annually and, according to IES officials, the criteria for meeting them were negotiated well into the fiscal year.

⁴¹In addition, IES determined that the current and prior contractors generally met the award fee plan performance measures.

⁴²The WWC's award fee plan includes cost management components but has no cost per product measurements.

extent to which educators find WWC products to be useful. IES's 2010 budget justification calls for a representative survey of WWC use among education decision makers to be conducted by 2013. However, IES officials told us that they were unsure whether the survey would take place, and IES does not currently have a plan in place to implement this survey.⁴³

Education Has Three Primary Ways to Disseminate Information about WWC Products, but Awareness and Use Vary among Target Audiences

Education Has Various Ways to Disseminate Information about WWC Products, but Awareness of the Clearinghouse Is Generally Limited

Education uses the WWC contractor, RELs, and DWW to disseminate information about the Clearinghouse to its target audience, which includes state and school district officials, as well as teachers and principals. In accordance with its contract, the WWC contractor disseminates information about its products electronically and through various events, such as formal presentations at conferences. The Clearinghouse's electronic dissemination methods include an e-mail listserv, Web-based seminars (webinars), and newsletters. For example, the WWC sends out notices to its e-mail listserv, alerting subscribers of the availability of new products, including intervention reports, practice guides, and quick reviews.⁴⁴ WWC staff told us that the webinars cover the same topics as their reports and are a relatively cost-effective way to disseminate information about products and methodology. In addition, WWC staff

⁴³This survey would ascertain whether IES has met its goal that at least 25 percent of decision makers surveyed will have consulted the Clearinghouse prior to making decisions on interventions in reading, writing, mathematics, science, or teacher quality by 2013.

⁴⁴WWC staff told us that the listserv had over 10,000 subscribers and that Web site visits increase after conferences.

disseminate information about WWC products at education conferences, such as teacher, principal, and researcher conferences. At these conferences, WWC staff may conduct formal presentations, have an exhibit featuring their products, or both. At conference exhibits, Clearinghouse staff answer questions about their products and provide literature to conference attendees. From July 2009 through June 2010, WWC staff were scheduled to present or have an exhibit at 14 conferences. WWC staff also told us that they work with other groups, such as education, research, and legislative organizations, in order to further disseminate information about WWC products to their members.

In addition, Education disseminates information about WWC products through IES's 10 RELs, which hold events that may feature information based on practice guides and refer educators to Clearinghouse products. Officials at all 10 RELs told us that they spent time disseminating information about WWC, in part by holding events that bridge research and practice. According to REL officials, these bridge events are attended primarily by school-, district-, and state-level education professionals and provide an opportunity for educators to discuss ways to implement research-based practices. Officials at all 10 RELs told us that bridge events focused on practice guides to some extent, and 7 indicated that WWC practice guides were the primary focus of these events. According to REL officials and WWC staff, these events sometimes included a WWC staff member to discuss methodology and panelists who helped develop the practice guides. RELs also disseminate research from WWC when responding to educator questions or concerns.⁴⁵ Officials from 7 of the 10 RELs told us their respective RELs generally use relevant WWC products (practice guides and others) when searching for research-based information to address educator questions.

In addition, Education's Office of Planning, Evaluation, and Policy Development disseminates information about WWC practice guides on its DWW Web site, which provides an online library of resources designed to help educators implement research-based instructional practice. This Web site uses different formats to present content based primarily on WWC Practice Guides and provides examples of possible ways educators might apply WWC research findings. For instance, to help educators implement

⁴⁵IES's Web site hosts an "Ask A REL" page, where educators can submit questions. "Ask A REL" is described on the Web site as being a collaborative reference desk service provided by the 10 RELs that functions much in the same way as a technical reference library.

the recommendations from the practice guide on dropout prevention, the DWW Web site features slideshows with examples of supportive academic environments and interviews with educators and experts on dropout prevention. In addition, the Web site includes sample materials, such as lesson plan templates, that provide an example of how to implement recommendations. The DWW also includes information on the research behind the recommendations and a link to the WWC Web site and the individual practice guides. According to IES officials, a recent analysis of the DWW Web site traffic showed that 49 state Web sites have links to the DWW Web site, which helps disseminate WWC products further to the education community.

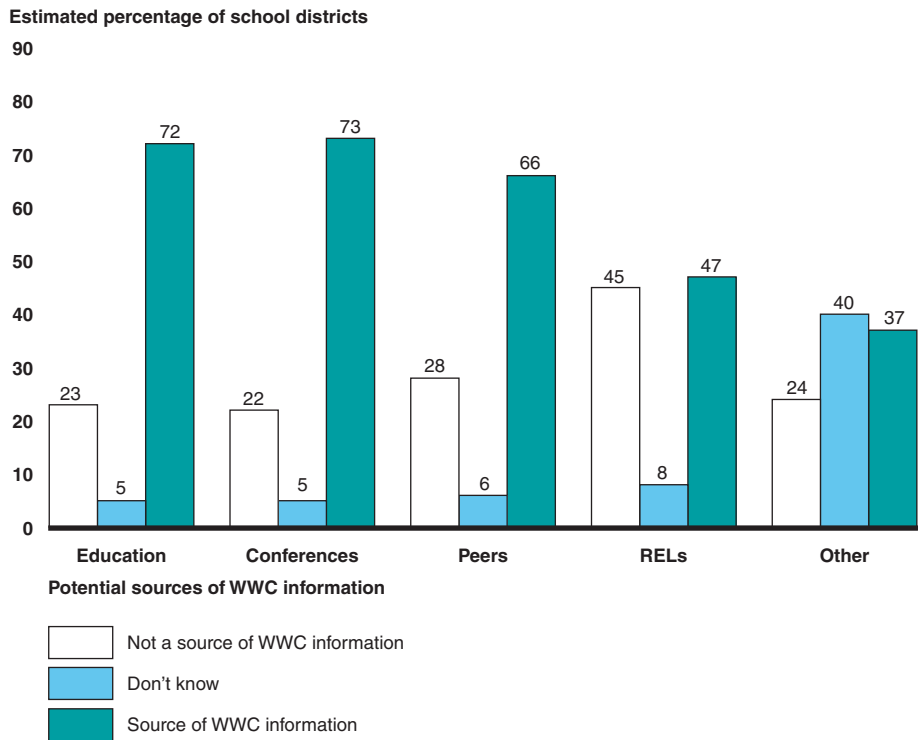
We found that 33 of the 38 states⁴⁶ that responded to our survey reported that they had heard of the WWC. Based on our survey results, we estimate that 42 percent of school districts have heard of the WWC and that the percentage is greater for school districts that rely to a very large extent on external sources for information on research-based practices.⁴⁷

School districts identified several sources of information about the Clearinghouse, including conferences and Education (see fig. 8).

⁴⁶Thirty-seven states and the District of Columbia responded to our survey. While the District of Columbia is not a state, we will refer to the survey respondents as representing 38 states.

⁴⁷The 95 percent confidence interval for this estimate is (36.7, 46.6).

Figure 8: Sources from Which District Officials Heard of the WWC



Source: GAO analysis of school district survey responses.

Notes: Estimates shown are based upon a probability survey. See appendix I for associated confidence intervals. The responses for other sources included state departments of education, Internet searches, and journals.

While the majority of states have accessed the WWC Web site, we estimate that only 34 percent of school districts have done so. Specifically, among the states that responded to our survey, 33 of 38 states⁴⁸ reported that they had accessed the WWC Web site at least once. In addition, 19 of states reported visiting the Web site at least seven times per year.⁴⁹ In contrast, an estimated 34 percent of school districts accessed the WWC Web site at

⁴⁸While based on 38 state-level respondents, this analysis provides the minimum number (33) of states (overall) that have accessed the WWC Web site. Regardless of whether or not the 13 states that did not respond to our survey have accessed the Clearinghouse Web site, 33 is about two-thirds of the 51 states and constitutes a majority of states.

⁴⁹Our survey asked respondents to indicate the number of times they had accessed the WWC Web site. Answer choices included never; less than twice a year; between 2 and 6 times per year; between 7 and 11 times per year; monthly; and more than once a month.

least once.⁵⁰ Further, we estimate that only 11 percent of school districts visited the Web site at least seven times per year.⁵¹ States and school districts that visited the WWC Web site less than seven times per year most often cited time constraints as the primary reason for their infrequent use.⁵²

In addition to the WWC, states and school districts use a variety of other sources of information to identify effective education practices. Most states and school districts use several broad sources of information, such as academic journals, education periodicals, and associations of educators. For example, 37 states reported using academic journals to identify such practices, and we estimate that about 97 percent of school districts used academic journals.⁵³ Overall, more school districts and states that responded to our survey used the WWC than used other research synthesis organizations.⁵⁴

While the WWC also includes teachers and principals in its target audience, we found that relatively few of the teachers and principals we contacted at education conferences had heard of the WWC. While not a generalizeable sample, we found that out of a total of 391 teachers who completed our questionnaire at four education conferences, only 18 had accessed the WWC Web site.⁵⁵ In addition, 341 teachers who had not accessed the WWC Web site told us they had not heard of the Web site. Similarly, among the 208 principals and other school administrators who

⁵⁰The 95 percent confidence interval for this estimate is (29.4 , 38.8).

⁵¹The 95 percent confidence interval for this estimate is (8.3, 14.8).

⁵²Fourteen states reported accessing the Clearinghouse six or fewer times a year, as did an estimated 72 percent of districts. In addition to time constraints (cited by 7 of the 14 states), five states reported that they did not access the WWC more frequently because its content was not relevant to their decisions.

⁵³The 95 percent confidence interval for this estimate is (94.2, 98.4).

⁵⁴Our survey asked states and districts to report how useful certain sources of information were in identifying effective education practices. The sources ranged from general (personal experience, education periodicals) to specific (RELs, federal outreach centers). In addition, we listed several research synthesis organizations by name, including the WWC and the Best Evidence Encyclopedia. See appendix II for more details.

⁵⁵Between November 2009 and February 2010, we attended a regional conference for the National Council for Teachers of Mathematics in Nashville, Tenn., as well as three national conferences: National Council for Teachers of English, ASCD (formerly the Association of Supervision and Curriculum Development), and the National Association of Secondary School Principals.

completed the questionnaire, only 32 had accessed the WWC Web site. Further, 135 principals and other school administrators told us they had not heard of the WWC.

States and School Districts Generally Used the Clearinghouse to a Small or Moderate Extent to Inform Decisions and Used Specific WWC Products to Varying Extents

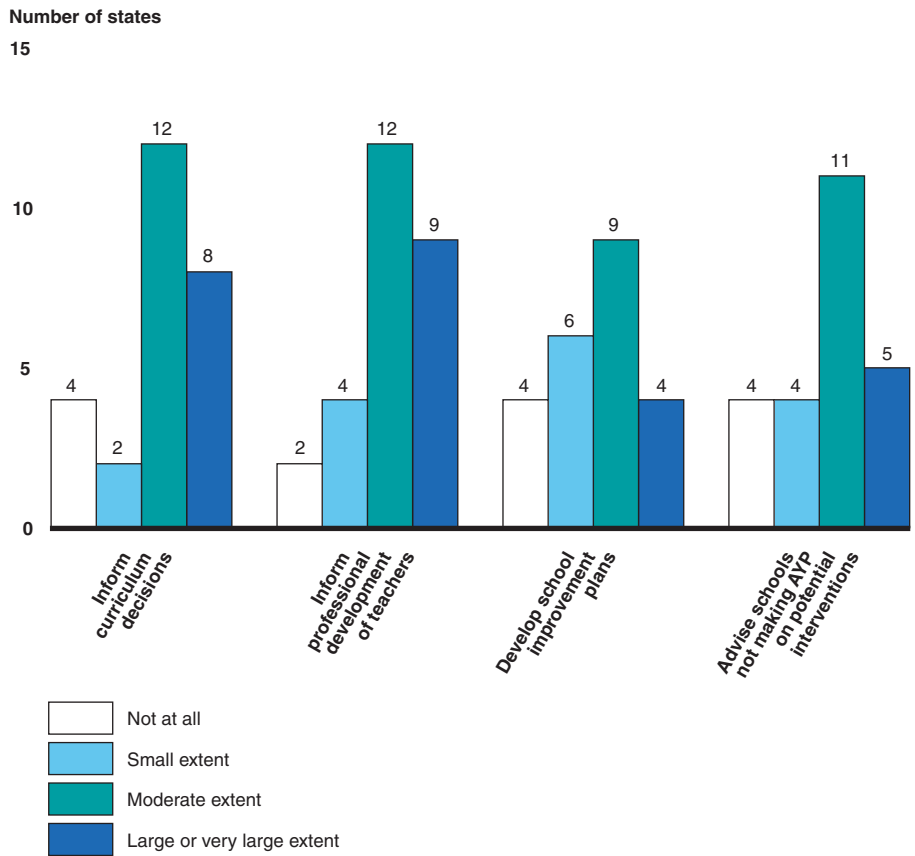
Based on our survey, most states and school districts that reported accessing the WWC Web site used it to inform decisions on effective education practices—a stated purpose of the WWC—to a small or moderate extent. Specifically, 25 of the 33 states that use the Clearinghouse indicated that they use it to a small or moderate extent to inform their decisions, while 6 reported using it to a large or very large extent.⁵⁶ We estimate that 72 percent of school districts that have accessed the Clearinghouse use the WWC to inform education decisions to a small or moderate extent, while only 18 percent use it to a large or very large extent.⁵⁷

States that used the WWC to inform decisions reported that they used the Clearinghouse for various purposes, including informing professional development and curriculum decisions. For example, 25 states reported using the Clearinghouse to inform professional development programs for teachers, and 22 reported using it to inform curriculum decisions. Fewer states used the Clearinghouse to advise districts that were not making adequate yearly progress (AYP) in meeting academic targets or to develop improvement plans for such districts. (Fig. 9 provides a breakdown of the extent to which these states use the Clearinghouse for various purposes.)

⁵⁶One state official responded that he and his staff had not used the WWC to inform any decisions on effective education practices, while another state official responded “Don’t know.”

⁵⁷The 95 percent confidence intervals for these estimates are (55.5, 87.7) and (10.3, 29.8), respectively.

Figure 9: Extent to Which States Use WWC for Various Purposes



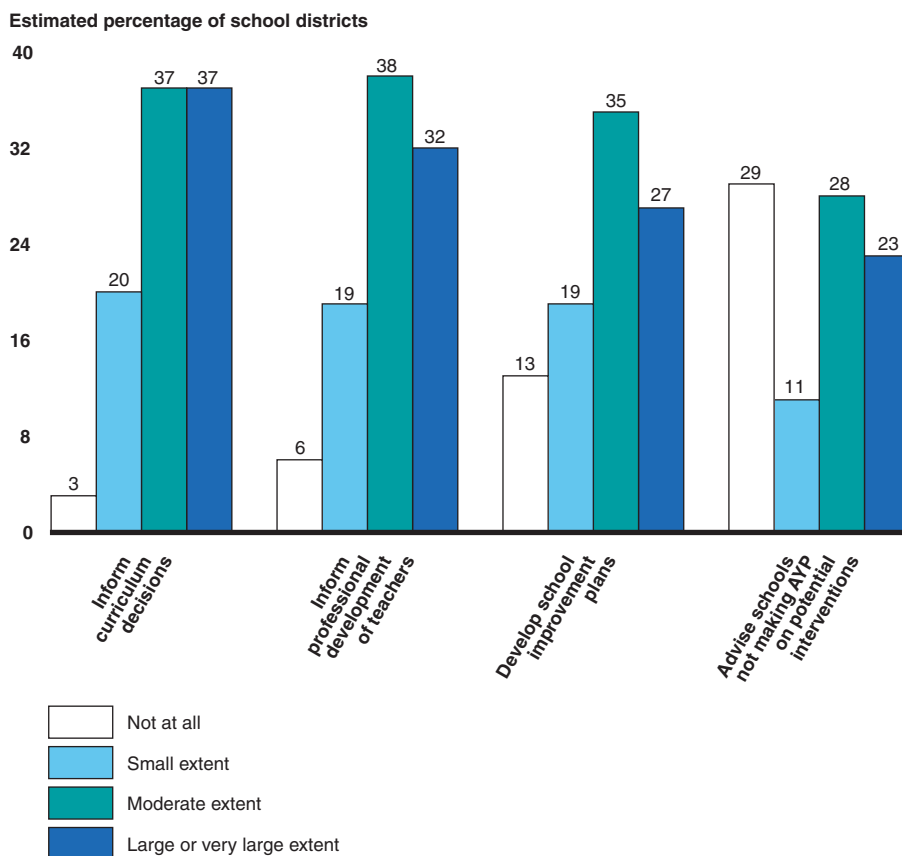
Source: GAO analysis of state responses.

Note: "I Don't Know" was also a response option, and is not displayed in the figure.

In addition, we estimate that among school districts that use the WWC to inform decisions on effective education practices, about 90 percent used it to inform curriculum decisions at least to a small extent, similar to the percentage that used the WWC to inform professional development decisions. However, fewer school districts used it to advise schools that did not meet academic goals or to develop school-level plans to help such

schools improve.⁵⁸ Figure 10 provides a breakdown of the extent to which these school districts use the Clearinghouse for various purposes.

Figure 10: Extent to Which School Districts That Have Used the Clearinghouse Used It for Various Purposes



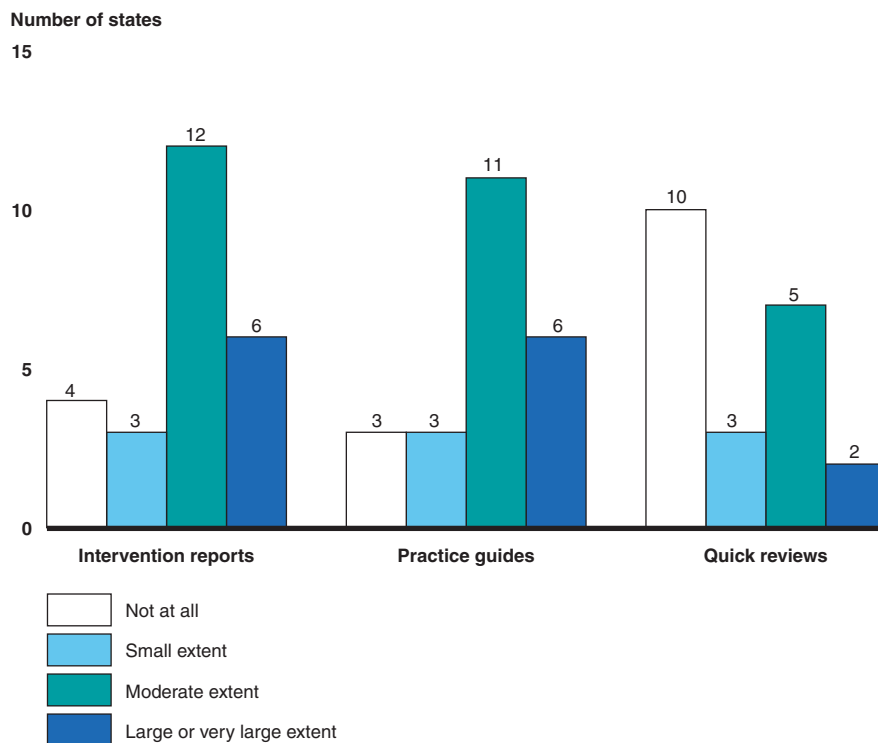
Source: GAO analysis of school district survey responses.

Note: Estimates shown are based upon a probability survey. See appendix I for associated confidence intervals. "I Don't Know" was also a response option, and is not displayed in the figure.

⁵⁸The estimates and their 95 percent confidence intervals were as follows: inform curriculum decisions—93 percent (85.5, 97.3); inform professional development of teachers—89.4 percent (81.7, 94.7).

States reported using specific WWC products—intervention reports and practice guides—more than quick reviews. Specifically, of the states that had used the Clearinghouse, 21 reported that they used intervention reports and 20 reported using practice guides, while only 12 reported using quick reviews. States used intervention reports and practice guides to a similar extent to inform education decisions. For example, for each product, six states reported using them to large or very large extent to inform such decisions (see fig. 11).

Figure 11: Extent to Which States Use Specific WWC Products

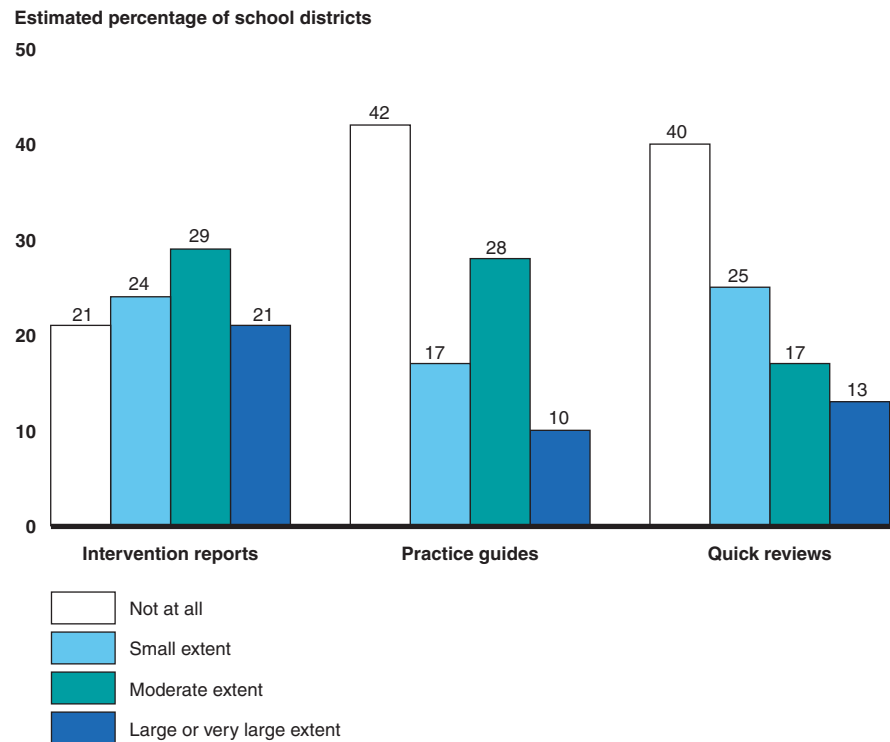


Source: GAO analysis of state survey responses.

However, the relative use of specific WWC products was different among school districts. We estimate that among school districts that use the Clearinghouse to inform decisions on effective education practices, more school districts use intervention reports relative to practice guides or quick reviews. Specifically, we estimate that 74 percent of those school districts that use the WWC have used its intervention reports to inform

education decisions,⁵⁹ while practice guides and quick reviews were each used by about half of such districts.⁶⁰ Based on our survey, an estimated 21 percent of school districts that use the WWC have used intervention reports to a large or very large extent,⁶¹ while about 10 percent use practice guides to a large or very large extent (see fig. 12).⁶²

Figure 12: Extent of Specific Product Use among Districts That Use the Clearinghouse



Source: GAO analysis of school district survey responses.

Note: Estimates shown are based upon a probability survey. See appendix I for associated confidence intervals.

⁵⁹The 95 percent confidence interval for this estimate is (64.3, 82.8).

⁶⁰The estimates and their 95 percent confidence intervals were as follows: practice guides—54.6 percent (44.4, 64.8); quick reviews—54.2 percent (44.4, 64.3).

⁶¹The 95 percent confidence interval for this estimate is (13.7, 30).

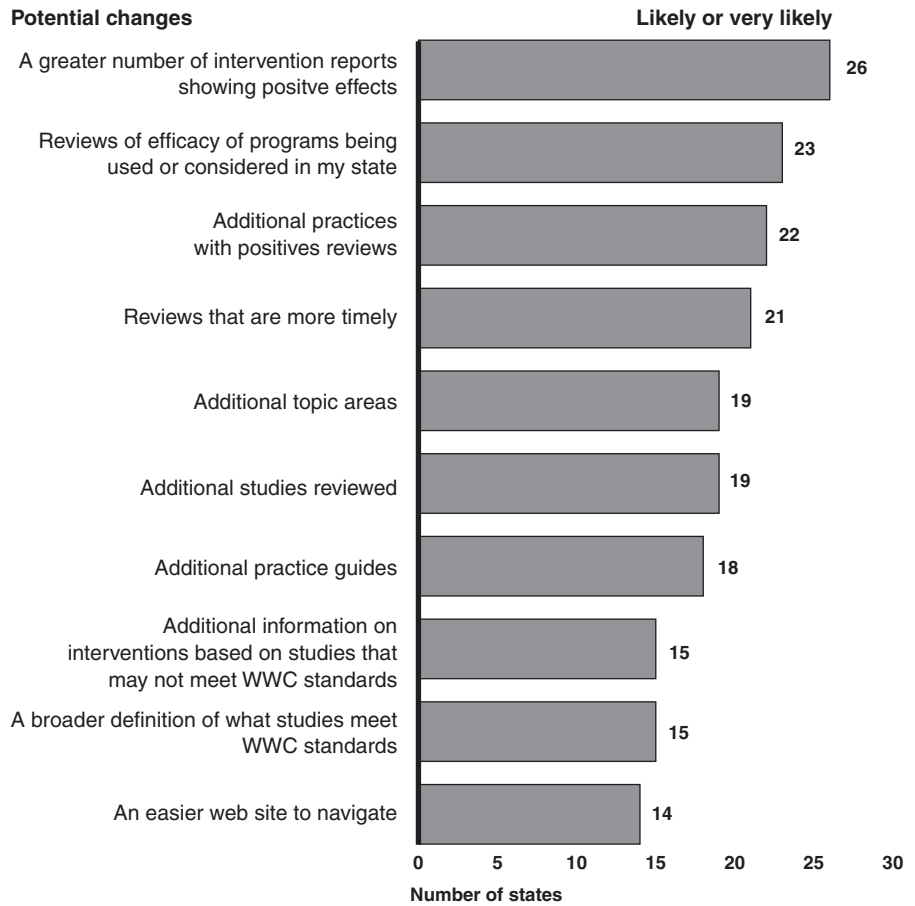
⁶²The 95 percent confidence interval for this estimate is (5.3, 17).

**States and School Districts
Would Likely Increase
Their Use of the
Clearinghouse If the WWC
Made Certain Changes**

Many states and school districts that had accessed the Clearinghouse reported that they would likely increase their use of the WWC if the Clearinghouse provided a broader array of information. For example, many states and school districts would be likely to increase their use of the Clearinghouse if it reviewed more studies, covered additional topics, or provided more relevant or timely reports. For example, 21 of the 33 states that had used the Clearinghouse reported that they would be somewhat or very likely to use the Clearinghouse more often if it had reviews that were more timely (see fig. 13).⁶³

⁶³Twenty-six states that had used the Clearinghouse reported that they would be somewhat likely or very likely to increase their use of the WWC if it had a greater number of intervention reports showing positive effects—a number which depends both on the number of interventions that the WWC reviews and whether the results of available research meeting WWC standards show positive effects.

Figure 13: Number of States That Reported They Would Likely Increase Their Use of WWC Given Certain Changes



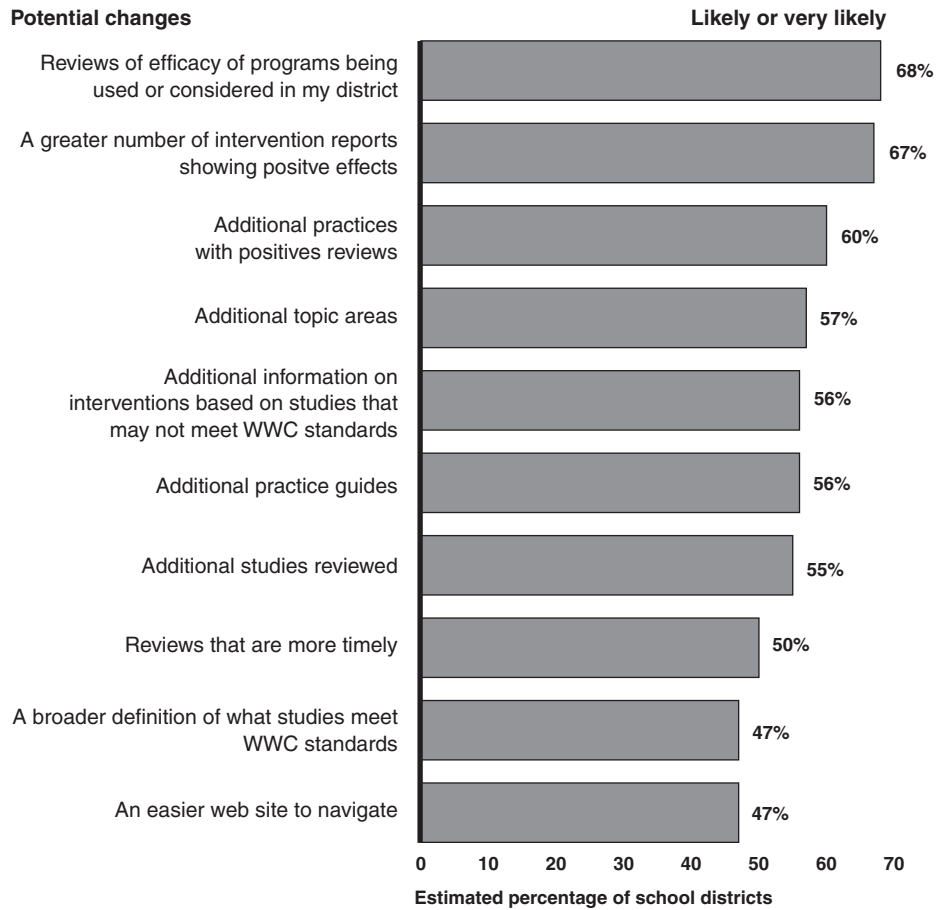
Source: GAO analysis of state survey responses.

In addition, based on our survey, we estimate that about two thirds of school districts that had accessed the Clearinghouse would likely increase their use if it included reviews of programs or interventions being used or considered in their school district.⁶⁴ An estimated 50 percent of school districts would likely increase their use of the Clearinghouse if it had reviews that were more timely (see fig. 14).⁶⁵

⁶⁴The 95 percent confidence interval for this estimate is (59.8, 76.1).

⁶⁵The 95 percent confidence interval for this estimate is (41.3, 58.6).

Figure 14: Estimated Percent of School Districts That Have Accessed the WWC That Would Likely Increase Their Use of the WWC Given Various Changes



Source: GAO analysis of school district survey responses.

Note: Estimates shown are based upon a probability survey. See appendix I for associated confidence intervals.

Conclusions

In 2007, Education substantially increased its financial investment in the WWC, and the Clearinghouse is significantly expanding its scope in an effort to better serve its target audience. Some of the new products aim to be more responsive to educators and education decision makers by providing timely information about evidence-based practices relevant to pressing needs. Such information could help states and districts identify strategies as they implement educational reform efforts—such as reforming low-performing schools or improving professional development—under ESEA and the Recovery Act. For example, WWC

research perspectives, still in development, are intended to help education decision makers as they address challenges related to spending Recovery Act funds. However, the development of these products and the release of other products were delayed, in part, by a substantial backlog in IES's review and approval processes. These delays hindered the timely release of several publications, and some products were released months after they were completed by the contractor. While IES recently eliminated the backlog, educators need to be able to rely on the Clearinghouse for timely and relevant information. According to our survey, many states and school districts reported that they would likely increase their use of the Clearinghouse if it released information more quickly.

While IES has increased annual report production, IES has not established reasonable production cost ranges or specific cost-related performance measures related to each product type. Without acceptable per product cost ranges, it is difficult for IES to assess the reasonableness of costs associated with certain products, even as IES takes steps to streamline production. IES's current study on costs may help IES establish acceptable cost ranges that could inform IES's performance measurements related to the WWC. In addition, such information could inform cost comparisons between the WWC and other research evaluation organizations or provide baselines for future contractor work.

In addition, IES has not established meaningful performance measures related to product usefulness. Until fiscal year 2010, IES tracked visits to its Web site and annual report production as a way to measure the productivity of the Clearinghouse. While these measures were important to accurately track the WWC's initial growth, they did not evaluate the degree to which the products were meeting the needs of educators. Specifically, IES currently does not have a way to gauge user satisfaction with WWC products, which is a common practice when developing and providing new products. Further, while IES currently incorporates some feedback from the WWC Web site users, to inform future topic areas, it does not systematically gauge its target audience's major areas of interest or concern—such as gathering information on interventions currently being used or considered in specific school districts or states. IES decides how to spread its limited resources across the various product types without directly measuring the extent to which educators use the WWC or how useful they find the various products to be. Measuring the use and usefulness of its products could help IES continue to improve content, develop products, and respond to the needs of educators and policymakers.

While some educators and policymakers find WWC products useful, many other educators are not familiar with the Clearinghouse. IES has spent a substantial amount of money, time, and effort producing various summaries of evidence-based practices, which cover both specific education interventions and general practices. This investment in the WWC was made in order to inform education professionals at all levels—from classroom teachers to policymakers—as they make decisions on how best to educate the nation’s children. Improved dissemination of WWC products could increase awareness and use of the WWC. Increased use of the Clearinghouse could help education professionals identify and implement effective educational interventions and practices, and potentially lead to increased student achievement.

Recommendations for Executive Action

We are making the following four recommendations based on our review.

To consistently release WWC products in a timely manner, we recommend the Secretary of Education direct IES to develop and implement strategies that help avoid future backlogs and ensure that IES’s review and approval processes keep pace with increased contractor production. Strategies could include shifting IES resources to ensure sufficient staff time for managing the peer review process and streamlining its approval processes.

To better track the costs and usefulness of the WWC, we recommend that the Secretary of Education direct IES to

- incorporate findings from its cost studies to develop performance measures related to costs, such as identifying a range of acceptable costs per product and using that information to monitor contractor spending; and
- develop performance measures related to product usefulness and periodically assess whether WWC products are meeting the needs of target audiences by gathering information on product usefulness in the proposed survey or through other means.

To reach more members of the target audience, we recommend the Secretary of Education direct IES to assess and improve its dissemination efforts to promote greater awareness and use of the WWC, for example, by developing a way to inform school districts of new products or encouraging educator professional development programs to focus on research-based practices such as those discussed in practice guides.

Agency Comments and Our Evaluation

We provided a draft of this report to the U.S. Department of Education for review and comment. Education officials provided written comments on a draft of this report, which are reproduced in appendix IV. Education also provided technical comments, which we incorporated into the report as appropriate.

Education generally agreed with our recommendations. Specifically, Education agreed to our recommendations on consistently releasing WWC products in a timely manner and assessing and improving its dissemination efforts. In its response to our recommendation on tracking the cost and usefulness of the WWC and its products, Education noted that IES has taken some steps that address the recommendation. With regard to costs, Education stated that it intends to incorporate the results of current cost studies into future work plans and monitoring efforts. We continue to recommend that these results be used to inform performance measures related to costs for future operations. With regard to tracking the usefulness of the WWC, Education noted that it uses a variety of tools to gather consumer input, such as a Help Desk and online voting for future report topics. While such feedback provides some information to the WWC, it relies on existing users and reflects the views of those users who provide feedback, rather than those of the broader population. However, as shown in our survey, only an estimated 34 percent of school districts have accessed the WWC Web site at least once—and fewer have used the Web site frequently. Education also noted that it would include a customer satisfaction survey in IES's review of its own performance, but whether the survey would be directed at current Clearinghouse customers or a broader audience, or whether the survey would identify how useful various WWC products are and how the WWC can be improved is unclear. More nationally representative information could help IES prioritize topics for intervention reports and practice guides and inform budget priorities.

We are sending copies of this report to the appropriate congressional committees, the Secretary of the U.S. Department of Education, and other interested parties. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staffs have any questions regarding this report, please contact me at (202) 512-7215 or ashbyc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributors to this report are listed in appendix V.

Cornelia M. Ashby

Cornelia M. Ashby
Director, Education, Workforce,
and Income Security Issues

List of committees

The Honorable Tom Harkin
Chairman
The Honorable Thad Cochran
Ranking Member
Subcommittee on Labor, Health and
Human Services, Education and Related Agencies
Committee on Appropriations
United States Senate

The Honorable David Obey
Chairman
The Honorable Todd Tiahrt
Ranking Member
Subcommittee on Labor, Health and
Human Services, Education and Related Agencies
Committee on Appropriations
House of Representatives

Appendix I: Objectives, Scope, and Methodology

To address all three objectives, we interviewed officials from the Institute of Education Sciences (IES), What Works Clearinghouse (WWC or Clearinghouse) contractors, and representatives from various educational organizations. To assess the research review process used by the IES's WWC, we reviewed WWC standards and procedures, reviewed an expert panel report that assessed the validity of the WWC review process, and collected information about the extent to which the WWC has implemented the panel's recommendations. To determine how performance and costs changed over time, we analyzed the costs and productivity of the two WWC contractors. To obtain information about the usefulness of WWC products, we conducted a Web-based survey of all state education agencies and a nationally representative sample of school districts. We also collected information about the usefulness of the WWC from teachers and principals at four education conferences. We conducted our work from September 2009 through July 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Assessment of WWC Research Review Process

GAO previously assessed the procedures and criteria used by the WWC by reviewing documents and interviewing IES officials and WWC contractors.¹ We reviewed WWC standards and procedures and examined the degree of consistency of these standards and procedures across education topic areas. We also reviewed the findings and recommendations from an expert panel report that assessed the validity of the WWC review process.² We obtained information from IES officials and WWC contractors on the extent to which the WWC has implemented the panel's recommendations. Further, we identified other concerns about the

¹GAO, *Program Evaluation: A Variety of Rigorous Methods Can Help Identify Effective Interventions*, GAO-10-30 (Washington, D.C.: Nov. 23, 2009).

²The expert panel was convened by the National Board for Education Sciences in 2008 in response to a mandate from the Senate Appropriations Committee. The National Board for Education Sciences, consisting of 15 voting members appointed by the President with the advice and consent of the Senate, provides IES guidance and oversight. The mandate directed the board to convene leading experts in rigorous evaluations to assess the WWC and specified that panel members should be free of conflicts of interest. Expert panel members included economists, statisticians, and professors with expertise in other systematic review efforts in the fields of health care, social policy, and education.

WWC review process through a literature review and interviews with researchers, and we interviewed IES officials and WWC contractors to assess the extent to which the Clearinghouse has addressed these concerns. We also examined the degree to which the WWC's review process is similar to that used by other entities engaged in systematic research review efforts.

Performance and Cost Data Analyses

To determine how performance and costs changed over time, we analyzed the costs and productivity of the two WWC contractors. We reviewed budget data and product release dates to analyze cost and productivity trends of the WWC. To examine performance, we interviewed the two contractors, as well as IES officials, and compared IES's performance measures and goals to actual outcomes.

We assessed the reliability of the WWC performance and cost data by (1) reviewing existing information about the data and the system that produced them and (2) interviewing agency officials knowledgeable about the data. We determined that the data were sufficiently reliable for the purposes of this report.

Survey of States and School Districts

To determine how WWC products are disseminated, we interviewed officials from IES and all 10 RELs, as well as WWC contractors. To determine how useful education professionals find WWC products to be, we designed and administered a Web-based survey of state education agencies in the 50 states and the District of Columbia and a nationally representative sample of local educational agencies (LEA). Specifically, the survey asked officials about (1) their general sources of information on effective educational practices, (2) the extent to which they use WWC products to inform curriculum decisions (including questions on specific intervention reports and practice guides), (3) how useful the officials find the information in the WWC, (4) the likelihood they would increase their usage if certain changes were made to the WWC Web site, and (5) the extent to which the officials use the Doing What Works and Best Evidence Encyclopedia Web sites to inform curriculum decisions and how useful the officials find these other information sources to be. We reproduce the questions we used in our analysis in figure 15. The survey was administered from February 18, 2010 to April 14, 2010.

To determine how the WWC was being used at the state level, we surveyed the state Secretary, Commissioner, or Superintendent of Education in the

50 states and the District of Columbia. Out of the 51 state officials surveyed, 38 responded to the survey.

To determine how the WWC was being used at the school district level, we surveyed a nationally representative sample of school districts across the country. We selected a stratified random sample of 625 LEAs from the population of 17,620 LEAs included in our sample frame of data obtained from the Common Core of Data for the 2007-08 school year. A total of 454 LEAs responded, resulting in a final response rate of 74 percent. Because we surveyed a sample of LEAs, survey results for the district are estimates of a population of LEAs and thus are subject to sampling errors that are associated with samples of this size and type. Our sample is only one of a large number of samples that we might have drawn. As each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval (e.g., plus or minus 10 percentage points). We excluded 12 of the sampled LEAs for various reasons—6 were closed, 3 did not administer any schools, 2 managed schools in a correctional facility, and 1 was a private school—and therefore were considered out of scope. All estimates produced from the sample and presented in this report are representative of the in-scope population.

The practical difficulties of conducting any survey may introduce nonsampling errors, such as difficulties interpreting a particular question, which can introduce unwanted variability into the survey results. We took steps to minimize nonsampling errors by pretesting the questionnaire over the phone with officials from two school districts and one state department of education in November and December 2009. We conducted pretests to verify that (1) the questions were clear and unambiguous, (2) terminology was used correctly, (3) the questionnaire did not place an undue burden on officials, and (4) the questionnaire was comprehensive and unbiased. An independent reviewer within GAO also reviewed a draft of the questionnaire prior to its administration. We made revisions to the questionnaire based on feedback from the pretests and independent review before administering the survey.

The survey-related data used in this report is based on the state and school district responses to the survey questions.

Figure 15: GAO’s Web-based Survey of State Departments of Education and Local Educational Agencies in the 50 States and the District of Columbia

3. To what extent, if at all, does your _____ rely on external evidence-based research to inform curriculum decisions?

(Check only one answer)

- 1. Very large extent
- 2. Large extent
- 3. Moderate extent
- 4. Small extent
- 5. Does not use external evidence-based research
- 6. Don't know

4. How useful, if at all, are each of the following research evaluation resources to you or your staff in identifying effective practices to implement in your _____?

(Please choose one response for each resource.)

	Very useful	Useful	Somewhat useful	Slightly useful	Not at all useful	No opinion	Have not used this source of information
4a. Best Evidence Encyclopedia (Johns Hopkins University)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4b. Child Trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4c. Coalition for Evidence Based Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4d. Doing What Works	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4e. RAND's Promising Practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4f. What Works Clearinghouse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4g. Other research synthesis clearinghouses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Recognizing that research evaluation resources are not necessarily the primary sources of information used to identify effective education practices, GAO is also interested in the role of other information sources.

How useful, if at all, are each of the following sources to you or your staff in identifying effective practices to implement in your _____?

(Please choose one response for each resource.)

	Very useful	Useful	Somewhat useful	Slightly useful	Not at all useful	No opinion	Have not used this source of information
5a. Academic journals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5b. Education-related periodicals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5c. Online databases (ERIC or others)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5d. University-based research institutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5e. Non-profit organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5f. Associations of educators or researchers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5g. Peer conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5h. Regional Education Laboratories (Department of Ed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5i. Other federal outreach centers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5j. State government offices and/or outreach centers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5k. Local data and/or internal research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5l. Community and parent input	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5m. Mentors/Colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5n. Personal experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5o. Other resource (Please specify below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other resource:

7. Have you or your staff heard of the What Works Clearinghouse (WWC)?

(Check only one answer)

- 1. Yes
- 2. No **(Go to Section 3: Use of Doing What Works)**
- 3. Don't know **(Go to Section 3: Use of Doing What Works)**

8. From which of the following source(s) did you or your staff hear about the WWC?

(Please choose one response for each source.)

	Yes	No	Don't know
8a. Conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8b. Peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8c. Regional Education Labs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8d. U.S. Department of Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8e. Other source <i>(Please specify below)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other source:

9. How frequently, if at all, do you or your staff access the WWC website?

(Check only one answer)

- 1. Never **(Go to question 28.)**
- 2. Less than twice a year **(Go to question 10.)**
- 3. Between 2 and 6 times per year **(Go to question 10.)**
- 4. Between 7 and 11 times per year **(Go to question 11.)**
- 5. Monthly **(Go to question 11.)**
- 6. More than once a month **(Go to question 11.)**

10. You indicated that you or your staff access the WWC website less than 7 times per year. Which of the following reasons best describes why you and your staff do not access the website more frequently?

(Check only one answer)

1. Time Constraints
2. Content is not relevant to our decisions
3. Disagree with recommendations on the site
4. Site is difficult to navigate
5. Other reason *(Please specify below)*

Other reason:

11. To what extent, if at all, have you or your staff used the WWC website to inform decisions on effective education practices?

(Check only one answer)

1. Very large extent **(Go to question 13.)**
2. Large extent **(Go to question 13.)**
3. Moderate extent **(Go to question 13.)**
4. Small extent **(Go to question 13.)**
5. Have not used the WWC to inform any decisions **(Go to question 12.)**
6. Don't know **(Go to question 12.)**

13. To what extent, if at all, have you or your staff used information in the WWC to do any of the following?

(Please choose one response for each action.)

	To a very large extent	To a large extent	To a moderate extent	To a small extent	Not at all	Don't know
13a. Inform professional development of teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13b. Advise _____s that are not making AYP on potential interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13c. Develop _____ improvement plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13d. Inform curriculum decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13e. Other use <i>(Please specify below)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other use:

14. To what extent have you or your staff used the WWC's Intervention Reports to inform decisions on effective education practices?

***Intervention Reports* provide an assessment of the efficacy of interventions based on existing research that meets certain standards.**

(Check only one answer)

1. Very large extent
2. Large extent
3. Moderate extent
4. Small extent
5. Don't know
6. Have not used the WWC Intervention Reports to inform any decisions **(Go to question 18.)**

18. To what extent have you or your staff used the WWC's Practice Guides to inform decisions on effective education practices?

Practice Guides are developed by a panel of experts and provide recommendations to help educators address common classroom or school-wide challenges.

(Check only one answer)

1. Very large extent
2. Large extent
3. Moderate extent
4. Small extent
5. Don't know
6. Have not used the WWC Practice Guides to inform any decisions ([Go to question 22.](#))

22. To what extent have you or your staff used the WWC's Quick Reviews to inform decisions on effective education practices?

Quick Reviews are designed to help educators and policy makers assess the quality of recently released research papers and reports.

(Check only one answer)

1. Very large extent
2. Large extent
3. Moderate extent
4. Small extent
5. Don't know
6. Have not used the WWC Quick Reviews to inform any decisions ([Go to question 25.](#))

Appendix I: Objectives, Scope, and Methodology

25. How likely or unlikely would you or your staff be to increase your usage of the WWC if any of the following information were added to the website?

(Please choose one response for each type of information.)

	Very Likely	Somewhat Likely	Neither likely nor unlikely	Somewhat unlikely	Very unlikely	No opinion
25a. Additional topic areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25b. Additional practice guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25c. Additional studies reviewed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25d. Additional information on interventions based on studies that may not meet <u>WWC standards</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25e. A broader definition of what studies meet <u>WWC standards</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25f. Additional practices with positive reviews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25g. Reviews of efficacy of programs being used or considered in my _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25h. Reviews that are more timely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25i. A greater number of intervention reports showing positive effects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25j. An easier website to navigate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25k. Other information <i>(Please specify below)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other information:

Source: GAO survey of states' and school districts' use of educational clearinghouses.

The following tables contain the estimates and associated confidence intervals for the data displayed in figures 8, 10, 12, and 14.

Table 5: Estimates and Confidence Intervals for Figure 8

Q8. From which of the following source(s) did you or your staff hear about the WWC?

Label	Response	Percentage	Lower bound	Upper bound
Conferences	Yes	72.72	65.26	80.19
Conferences	No	21.83	15.17	29.77
Conferences	Don't know	5.45	2.36	10.50
Peers	Yes	66.43	58.39	74.47
Peers	No	27.80	20.22	35.37
Peers	Don't know	5.77	2.32	11.62
Regional Education Labs	Yes	47.14	38.40	55.89
Regional Education Labs	No	45.24	36.51	53.97
Regional Education Labs	Don't know	7.62	3.81	13.34
U.S. Department of Education	Yes	71.93	64.41	79.46
U.S. Department of Education	No	22.85	16.17	30.72
U.S. Department of Education	Don't know	5.22	2.00	10.80

Source: GAO analysis.

Table 6: Estimates and Confidence Intervals for Figure 10

Q13: To what extent, if at all, have you or your staff used information in the WWC to do any of the following?

Label	Response	Percentage	Lower bound	Upper bound
Inform professional development of teachers	To a very large extent	12.33	6.24	21.15
	To a large extent	19.49	11.74	29.45
	To a moderate extent	38.12	28.25	48.00
	To a small extent	19.48	11.77	29.35
	Not at all	5.90	2.40	11.80
	Don't know	4.67	1.09	12.44
Advise schools that are not making adequate yearly progress on potential interventions	To a very large extent	13.23	6.90	22.23
	To a large extent	10.12	5.12	17.48
	To a moderate extent	28.21	18.82	39.24
	To a small extent	11.42	5.69	19.82
	Not at all	28.65	19.55	39.23
Develop school improvement plans	Don't know	8.36	3.54	16.16
	To a very large extent	12.07	6.19	20.56
	To a large extent	14.79	7.59	24.99
	To a moderate extent	34.83	24.68	44.98

Appendix I: Objectives, Scope, and Methodology

Label	Response	Percentage	Lower bound	Upper bound
	To a small extent	19.15	11.72	28.63
	Not at all	13.37	7.35	21.73
	Don't know	5.79	1.80	13.36
Inform curriculum decisions	To a very large extent	14.95	8.53	23.61
	To a large extent	21.99	14.15	31.65
	To a moderate extent	36.50	26.71	46.28
	To a small extent	19.50	12.02	29.00
	Not at all	3.31	0.92	8.23
	Don't know	3.75	0.63	11.47

Source: GAO analysis.

Table 7: Estimates and Confidence Intervals for Figure 12

Q14: To what extent have you or your staff used the WWCs intervention reports to inform decisions on effective education practices?

Q18: To what extent have you or your staff used the WWCs practice guides to inform decisions on effective education practices?

Q22: To what extent have you or your staff used the WWCs quick reviews to inform decisions on effective education practices?

Label	Response	Percentage	Lower bound	Upper bound
Intervention reports	Very large or large extent	20.98	13.66	29.99
	Moderate extent	29.42	20.13	38.71
	Small extent	23.99	15.26	34.67
	Don't know	4.60	1.48	10.51
	Have not used the WWC intervention report to inform decisions	21.01	13.23	30.73
Practice guides	Very large or large extent	10.06	5.28	16.95
	Moderate extent	27.78	18.84	38.23
	Small extent	16.77	10.12	25.44
	Don't know	2.91	0.70	7.75
	Have not used the WWC practice guides to inform decisions	42.48	32.26	52.70
Quick reviews	Very large or large extent	12.93	6.66	21.92
	Moderate extent	16.66	9.79	25.70
	Small extent	24.65	15.93	35.21
	Don't know	5.78	2.35	11.55
	Have not used the WWC quick reviews to inform decisions	39.98	30.16	49.81

Source: GAO analysis.

Table 8: Estimates and Confidence Intervals for Figure 14

Q25: How likely or unlikely would you or your staff be to increase your usage of the WWC if any of the following information were added to the Web site?

Label	Response	Percentage	Lower bound	Upper bound
Reviews of efficacy of programs being used or considered in my district	Very likely or somewhat likely	67.92	59.77	76.06
A greater number of intervention reports showing positive effects	Very likely or somewhat likely	66.54	58.30	74.77
Additional practices with positives reviews	Very likely or somewhat likely	60.49	51.95	69.03
Additional Topic Areas	Very likely or somewhat likely	57.27	48.66	65.88
Additional information on interventions based on studies that may not meet WWC standards	Very likely or somewhat likely	55.97	47.43	64.51
Additional Practice Guides	Very likely or somewhat likely	55.80	47.12	64.47
Additional studies reviewed	Very likely or somewhat likely	54.89	46.24	63.53
Reviews that are more timely	Very likely or somewhat likely	49.95	41.32	58.57
A broader definition of what studies meet WWC standards	Very likely or somewhat likely	47.38	38.70	56.05
An easier web site to navigate	Very likely or somewhat likely	47.01	38.30	55.73
Other Information	Very likely or somewhat likely	17.37	8.69	29.58

Source: GAO analysis.

Information from Teachers, Principals, and Researchers

In addition to interviews with teacher, principal, and research organizations, we obtained information about the usefulness of the WWC by administering a questionnaire at four conferences of teachers and principals. Table 9 provides more information about the conferences we attended.

Table 9: Conferences Attended to Administer Questionnaires to Teachers and Principals

Conference	Regional/ national	Location	Conference dates	Attendance dates
National Council of Teachers of Mathematics	Regional	Nashville, Tennessee	November 18-20, 2009	November 19-20, 2009
National Council of Teachers of English	National	Philadelphia, Pennsylvania	November 19-24, 2009	November 21-22, 2009
ASCD (formerly the Association of Supervisors and Curriculum Developers)	National	San Antonio, Texas	March 6–8, 2010	March 7-8, 2010
National Association of Secondary School Principals	National	Phoenix, Arizona	March 12-14, 2010	March 12-13, 2010

Source: GAO.

We selected these conferences because they were relevant to segments of the WWC's target population that we were not reaching through our survey and they were held at times that coincided with our report time frames. At each of these conferences, conference organizers agreed to have GAO have a table either inside the exhibit hall or just outside it. The questionnaires included questions on awareness and use of WWC—including use of specific products and use of other information sources to identify effective educational practices. For those who had not used the WWC, we also asked them to specify the reason they had not used it. The information gathered through the questionnaires is not generalizable and does not represent the views of teachers and principals nationwide.

Appendix II: Other Sources of Information Districts Use To Identify Effective Education Practices

Source of information	Estimated percent of district officials that find this source Very Useful or Useful	Estimated percent of district officials that find this source Somewhat or Slightly Useful	Estimated percent of district officials find this source not at all useful or no opinion	Not used
Personal Experience	80.6 (76.46, 84.79)	16.6 (12.73, 20.53)	2.3 (0.90, 4.67)	0.5 (0.06, 1.67)
Local data and/or internal research	77.4 (72.85, 81.84)	14.9 (11.30, 19.13)	6.2 (3.79, 9.58)	1.5 (0.48, 3.55)
Peer Conferences	77.3 (72.93, 81.74)	16.7 (12.88, 20.58)	4.2 (2.28, 7.14)	1.7 (0.60, 3.73)
Mentors/Colleagues	74.5 (69.97, 79.08)	21 (16.74, 25.17)	3.2 (1.53, 5.84)	1.3 (0.42, 3.05)
Education-related periodicals	70.9 (66.00, 75.72)	23 (18.50, 27.50)	3.2 (1.48, 6.02)	2.9 (1.34, 5.49)
Associations of educators or researchers	65 (59.94, 70.04)	23.1 (18.59, 27.57)	6.3 (3.83, 9.66)	5.6 (3.39, 8.72)
Academic journals	64.3 (59.22, 69.41)	27.7 (22.90, 32.45)	4.7 (2.59, 7.81)	3.3 (1.64, 5.85)
Online databases (ERIC or others)	54.4 (49.10, 59.63)	30.6 (25.62, 35.53)	7.9 (5.12, 11.59)	7.1 (4.58, 10.52)
Community and parent input	51.7 (46.48, 56.97)	39.9 (34.67, 45.06)	6.2 (3.82, 9.53)	2.2 (0.95, 4.19)
University based research institutions	50.3 (45.11, 55.49)	35.4 (30.25, 40.45)	9.3 (6.30, 13.16)	5 (2.94, 7.98)
Regional Educational Laboratories	45.9 (40.66, 51.03)	31.3 (26.32, 36.18)	11.5 (8.18, 15.59)	11.4 (8.16, 15.36)
State government offices and/or outreach centers	39.8 (34.68, 45.01)	37.8 (32.64, 42.88)	15.79 (11.87, 20.10)	6.7 (4.33, 9.91)
Other federal outreach centers	17.9 (13.99, 21.83)	34.7 (29.65, 39.77)	24 (19.41, 28.67)	23.3 (18.82, 27.86)
What Works Clearinghouse	24.4 (20.07, 28.76)	14.8 (11.20, 19.09)	16.1 (12.25, 20.57)	44.7 (39.37, 49.96)
Doing What Works	22.8 (18.40, 27.10)	13.8 (10.42, 17.68)	14.2 (10.52, 18.50)	49.3 (44.03, 54.62)
Non-profit organization	21.7 (17.63, 25.83)	43.9 (38.58, 49.11)	17 (13.06, 21.60)	17.4 (13.22, 21.59)
RANDs Promising Practices	10.1 (7.34, 13.36)	14 (10.48, 18.09)	18.9 (14.54, 23.25)	57.1 (51.77, 62.40)
Child Trends	9.7 (6.74, 13.29)	14.5 (10.93, 18.77)	16.73 (12.84, 21.25)	59.1 (53.84, 64.33)

Source: GAO analysis of survey results from the following questions: (4) How useful, if at all, are each of the following research evaluation resources to you or your staff in identifying effective practices to implement in your district?; and (5) Recognizing that research evaluation resources are not necessarily the primary sources of information used to identify effective education practices, GAO is also interested in the role of other information sources. How useful, if at all, are each of the following sources to you or your staff in identifying effective practices to implement in your district?

Appendix III: IES and WWC Response to Expert Panel Recommendations

Expert panel recommendation	IES/WWC response	Implementation status
<p>1. Full review. IES should commission a full review of the WWC, including a review of the Clearinghouse’s mission and of the WWC practice guides, which the panel did not attempt to evaluate. The panel also recommends that IES consider instituting a regular review process to ensure that the WWC is using the most appropriate standards in its work.</p>	<p>IES is considering an appropriate mechanism and time for conducting a complete review of the WWC. IES believes that the first 2 years of the current contract necessitated a tremendous development effort to transfer the infrastructure of the Clearinghouse in year one from one contractor to another, and in year two, to complete reviews in a consistent manner that began under the original contract. Now that the Clearinghouse is more clearly in the production phase, this may be the appropriate time to plan for a complete review.</p>	Under consideration
<p>2(i). Protocol templates. WWC should develop standards for crossover and assignment noncompliance, and for adjusting intention to treat effects across studies.</p>	<p>IES is currently considering having the WWC develop a standard for assessing crossover compliance, following the process recently used to revise its attrition standard.</p> <p>Currently, the WWC documents crossover reported in studies. Principal investigators have discretion to use this information to determine whether a study represents a reasonable test of the intervention. Evidence of crossover and assignment noncompliance is documented in the intervention report and its appendix table A.1. Readers can use that information to assess the findings. IES agrees there is value in adjusting intent-to-treat effects for compliance, but believes this adjustment is inconsistent with its goal of having the WWC be transparent in how it reports findings. Making its own estimates to account for compliance will lead to differences between what the WWC reports and what is found in publicly available literature.</p> <p>Currently the WWC does adjust for clustering when authors report their findings incorrectly. However, the purpose of the clustering adjustment is to correct for an analytic problem in the methods authors use to estimate variances, which generally causes them to overstate the precision of their findings. In contrast, adjusting for compliance will yield an alternate estimate of effects that may differ from the one reported by the study.</p>	Under consideration

**Appendix III: IES and WWC Response to
Expert Panel Recommendations**

Expert panel recommendation	IES/WWC response	Implementation status
<p>2(ii). Protocol templates. Develop standards for documenting the program received in the control arm of randomized experiments (or by members of the comparison group in quasi-experimental designs), and potentially incorporating this information in making comparisons across studies and/or interventions.</p>	<p>Though not based on a standard, WWC practice is for reviewers to document the counterfactual in study review guides and in intervention reports (the information is reported in appendix table A.1). Reviewers routinely send author queries for this information, if it is not provided in the study.</p> <p>IES has asked the WWC to assess how other review organizations report counterfactual information and the utility of incorporating this information into its reports. IES officials are also considering an alternative approach that would code information about the counterfactual in a study into the study database, which then would generate summary tables that would report results for studies that have similar counterfactuals. This approach has downsides as well, since the set of counterfactuals could be quite varied and many assumptions would have to be made to group counterfactuals together. We are therefore proceeding cautiously in making any changes to current WWC practice.</p>	<p>Considered but not planning to implement</p>
<p>2 (iii). Protocol templates. Revise standards for multiple comparisons in light of the recent research report by Peter Schochet entitled <i>Guidelines for Multiple Testing in Experimental Evaluations of Educational Intervention.</i></p>	<p>WWC staff consulted with Dr. Schochet to investigate the possibility of revising the multiple comparison standards.</p> <p>Dr. Schochet indicated that his report focused on issues related to multiple comparisons within single studies. It did not tackle issues related to multiple comparisons issues that may arise when synthesizing evidence for a set of studies. WWC procedures are consistent with his report for handling multiple comparisons within a study.</p>	<p>Considered but not planning to implement</p>
<p>2(iv). Protocol templates. Reconsider the current process of setting different attrition standards in different topic areas.</p>	<p>At the time of the National Board of Education Sciences Expert Panel's data collection, the WWC was already reviewing its attrition standards. The WWC released new attrition standards in December 2008 in the <i>Procedures and Standards Handbook</i>. The new standards requires a principal investigator in a topic area to choose one of two well-specified attrition boundaries, and the standards include guidance on how to choose between the boundaries based on the nature of research in the topic area.</p> <p>The attrition discussion is in the WWC <i>Procedures and Standards Handbook</i> (Version 2.0) posted on the Clearinghouse's Web site.</p>	<p>Implemented</p>

**Appendix III: IES and WWC Response to
Expert Panel Recommendations**

Expert panel recommendation	IES/WWC response	Implementation status
<p>2(v). Protocol templates. Establish a protocol to keep track of potential conflicts of interest, such as cases where a study is funded or conducted by a program developer, and consider making that information available in its reports.</p>	<p>IES is considering options for collecting and documenting potential conflicts of interest.</p> <p>Sources of funding are rarely included in published documents beyond government and foundation support. An alternate source of information for tracking potential conflicts of interest would be for the WWC to request that study authors identify their source of funding, which would provide the WWC with a basis for flagging a potential conflict of interest. Any effort would depend on cooperation from authors because the WWC has no leverage to formally require authors to declare potential conflicts (which some academic journals require as a condition for publication). WWC's experience to date is that study authors frequently fail to respond to requests for additional information, and IES officials expect that many study authors likewise will not respond to requests for information about funding sources, or may judge that it is not in their proprietary interest to provide the information. Currently the WWC only queries authors in cases where the Clearinghouse needs additional information. Querying all authors and tracking their responses would increase costs for intervention reports.</p> <p>Another potential option is to ask developers, when they are reviewing the list of studies WWC found during the literature search for comprehensiveness, to note any studies that they funded.</p>	Under consideration
<p>2(vi). Protocol templates. Define precisely the standards for "randomization" in a multilevel setting.</p>	<p>The current version of the handbook gives guidance on standards for random assignment in simple cases. The next version of the handbook (forthcoming in 2010) will provide guidance and examples for multilevel settings, with explicit guidance on acceptable practice and potential issues with random assignment in a multilevel setting.</p>	Implemented
<p>3. Documentation of search process. WWC should expand the protocol templates to specify more explicit documentation of the actual search process used in each topic area and maintain a record of the results of the process that can be used to guide decision making on future modifications.</p>	<p>IES asked the WWC to review the search process. The WWC now takes steps to ensure that search records are maintained. Each team and the library maintain a record of conducted searches. More documentation on the process will be included in the forthcoming revision of the handbook.</p>	Implemented

**Appendix III: IES and WWC Response to
Expert Panel Recommendations**

Expert panel recommendation	IES/WWC response	Implementation status
<p>4. Reliability of eligibility screening. WWC should conduct regular studies of the reliability of the eligibility screening process, using two independent screeners, and use the results from these studies to refine the eligibility screening rules and screening practices.</p>	<p>The WWC is undertaking a pilot using five recent evidence reports in different topic areas. Because WWC screeners are encouraged to pass to the next stage any study for which they are uncertain about eligibility, the proportion of eligible studies that are excluded is the salient error rate (the other source of error is when screeners include an ineligible study in a review, but this error is then offset by the review).</p> <p>IES officials are not aware of any established standards for acceptable error rates (there are tradeoffs between making Type I vs. Type II errors relating to cost), but will examine this issue further. If the screening error rate is larger than the IES and the WWC believes is acceptable, IES officials will assess whether additional training or two screeners is appropriate given the different costs and benefits of each approach.</p>	Under consideration
<p>5. Documentation of screening process. WWC reports should include a flow chart documenting the flow of studies through each review and number of studies excluded at each point, and a table of excluded studies, listing specific reasons for exclusion for each study.</p>	<p>Currently, reference lists for WWC intervention reports include all studies, both eligible and ineligible, located in the search process. Ineligible studies are flagged with the primary reason for not qualifying for further WWC review. Intervention reports do not list materials such as product descriptions or reviews of products that are deemed not relevant to the intervention being reviewed.</p> <p>To make the number of studies (both eligible and ineligible studies) more apparent to readers, the WWC will add a text box to intervention reports located in front of the listing of reports. The text box will summarize the number of studies that met different conditions (this approach currently is used for reports in which none of the studies meet standards). The box will serve the same purpose as a flow chart but the codes used to describe the final status for reports will be the same ones currently used in the citation appendix. The WWC plans to begin including the text box in reports released in 2010 and thereafter.</p>	Implemented
<p>6. Misalignment adjustment. In cases where a study analysis is "misaligned," WWC staff should request that study authors reanalyze their data correctly, taking into account the unit of randomization and clustering. The panel recommends that the results from the process be compared to the adjustment procedure currently specified, to develop evidence on the validity of the latter.</p>	<p>Ideally, the primary source for reanalyses of data would be study authors. However, as noted above in response to recommendation 2(v), it is common for authors not to respond to the WWC's requests for additional information. Reanalyzing the data also would require additional effort by the authors and would run into difficulties when studies are dated or are based on data that has been destroyed to comply with confidentiality or privacy restrictions.</p> <p>The WWC recently undertook a survey of published clustering estimates. It found that the WWC's current default clustering correction is consistent with published estimates for achievement and behavioral outcomes. The WWC will continue to monitor research developments on this topic.</p>	Considered but not planning to implement

**Appendix III: IES and WWC Response to
Expert Panel Recommendations**

Expert panel recommendation	IES/WWC response	Implementation status
<p>7. Combining evidence across multiple studies. WWC should re-evaluate its procedures for combining evidence across studies, with specific attention to the issue of how the rules for combining evidence can be optimally tuned, given the objectives of the WWC review process and the sample sizes in typical studies for a topic area.</p>	<p>There are, of course, many possible ways to summarize evidence. Given its intended broad and primarily nontechnical audience, the WWC's current approach is designed to be transparent and easily explained. IES believes that having the WWC conduct its own analyses to estimate intervention effects, as statistical meta-analyses do, would be inconsistent with these goals.</p> <p>However, as an alternative to modifying the WWC's main approach for reporting findings, IES is considering having the WWC conduct supplemental meta-analyses related to specific questions of interest, and releasing these findings as a separate report that would complement intervention reports. For example, a report could analyze whether computer mediated approaches to teaching reading are more or less effective than approaches that rely solely on teachers, based on already-released interventions reports. Having a separate report enables the WWC to continue using its current transparent approach, while also using statistical techniques that combine evidence in other ways.</p>	Under consideration
<p>8. Reporting. (i) Published reports on the Web site should include the topic area protocols, as well as more information on the screening process results that led to the set of eligible studies actually summarized in the topic area reports. (ii) WWC should make available its <i>Standards and Procedures Handbook</i>, including appendixes, as well as all other relevant documents that establish and document its policies and procedures.</p>	<p>Topic area protocols are available on the topic area home pages.</p> <p>Just after the expert panel's report, the WWC released its <i>Procedures and Standards Handbook</i> in December 2008. A revision currently is under way that will include more detail on the screening process. See the response to (3) above related to results of the screening process and the response to (5) regarding the results of the screening process.</p>	Implemented
<p>9. Practice guides. Clearly separate practice guides from the topic and intervention reports.</p>	<p>IES agrees that these products need to remain distinct. Practice guides are on a separate Web site tab that separates them from intervention reports. The next revision of the handbook (forthcoming in 2010) will include a chapter describing the practice guide development process and how it is different from that of the evidence reports.</p> <p>The recently released guide on What Works for Practitioners also provides more information on reports and practice guides, and the WWC is preparing a video tutorial that will explain the differences to users.</p>	Implemented

**Appendix III: IES and WWC Response to
Expert Panel Recommendations**

Expert panel recommendation	IES/WWC response	Implementation status
<p>10. Outreach and collaboration with other organizations. (i) The WWC should build and maintain a relationship with national and international organizations focusing on systematic reviews to engage in the broader scientific community and learn about the latest standards and practices. (ii) The WWC should convene working groups with a mixture of researchers (including specialists in education research and systematic reviews) to address the development of new standards for the review and synthesis of studies.</p>	<p>The WWC tries to keep abreast of developments in the field, for example, by routinely checking materials from the Cochrane Collaborative when developing new standards or approaches.</p> <p>Most recently, the WWC has undertaken the following outreach efforts to connect with other organizations conducting systematic reviews:</p> <ul style="list-style-type: none"> • The WWC sponsored a forum on research methods in December 2008 that featured speakers from the National Academy of Sciences, the National Cancer Institute, and the Cochrane Collaboration. • In June 2009 WWC staff attended the Cochrane conference on practice guides in June to learn about state of the art methods in research synthesis and practice guides. • The WWC is presenting a workshop on WWC standards at the upcoming annual conference of the Association of Public Policy and Management. <p>The WWC has also met with six international contacts (from Sweden, Denmark, Hungary, England, Interamerican Development Bank, and Trinidad/Tobago) in response to inquiries about how governments or organizations could implement their own clearinghouse operations.</p> <p>Recently the WWC began a webinar series to disseminate its new practice guides. The webinar includes researchers and practitioners in its audience.</p> <p>The WWC convened two groups of researchers to develop its forthcoming standards on single-subject designs and regression discontinuity designs. It will continue to bring together researchers as needs for new standards are identified. This approach will continue to be used for developing new standards.</p>	<p>Implemented</p>

Source: GAO analysis of IES and WWC data.

Appendix IV: Comments from the Department of Education



UNITED STATES DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

THE DIRECTOR

July 6, 2010

Ms. Cornelia M. Ashby
Director, Education, Workforce,
and Income Security Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Ashby:

Thank you for the opportunity to respond to the Government Accountability Office (GAO) draft report, *Improved Dissemination and Timely Product Release Would Enhance the Usefulness of the What Works Clearinghouse* (GAO-10-644).

This report indicates that GAO, as well as a congressionally mandated panel of experts, found that the What Works Clearinghouse's review process follows accepted standards for evaluating research on the effectiveness of education interventions. It notes that the Clearinghouse is responding to recommendations made by the expert panel to further improve its review and reporting processes, and to researchers who have criticized the WWC for excluding some types of research designs that may be appropriate for evaluating certain education programs, such as special education. It also recognized that product output and scope of the WWC have increased.

While the report emphasized the need for more timely release of WWC reports, it noted, but did not highlight, other important findings from the school district survey that point to important avenues for improvement. For example, a higher proportion of district respondents cited having evidence reviews of programs that they might use in their local areas (68 percent) or that show positive effects (67 percent) as a reason to use WWC products than cited getting reviews more quickly (50 percent) (Figure 15, page 36). Given that the timetable of WWC reports is not posted publicly, we are not sure how to interpret districts' concerns with timeliness, but we have heard their need for more relevant evidence reports covering more educational areas and programs. As GAO noted, a backlog of reports that built up during a time of senior leadership turnover has been resolved, and many new reports are soon to be released. In addition, the Institute of Education Sciences is continuing its efforts to ensure that expansion into new topic areas is responsive to the needs of the field.

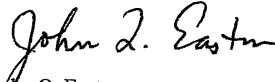
555 NEW JERSEY AVE., NW, WASHINGTON, D.C. 20208

**Appendix IV: Comments from the Department
of Education**

Page 2

We appreciate the opportunity to comment on the draft report. The Department of Education has prepared the attached comments in response to your draft report. If you have any questions regarding this response, please contact Dr. Rebecca Maynard, Commissioner for Education Evaluation and Regional Assistance, in the Institute of Education Sciences at (202) 208-1289.

Sincerely,



John Q. Easton
Director

Attachments

Attachment 1

IES Response to GAO Report: Improved Dissemination and Timely Product Release Would Enhance the Usefulness of the What Works Clearinghouse, Draft

Recommendation 1:

To consistently release WWC products in a timely manner, we recommend the Secretary of Education direct IES to develop and implement strategies that help avoid future backlogs and ensure that IES' review and approval processes keep pace with increased contractor production. Strategies could include shifting IES resources to ensure sufficient staff time for managing the peer review process and streamlining its approval process.

Response:

The Department of Education (Department) agrees with GAO's recommendation and is developing and implementing strategies to ensure that IES' review and approval processes keep pace with production. The Director of the Institute of Education Sciences has recently appointed a Commissioner of the National Center for Education Evaluation and Regional Assistance who will oversee the content and operations of the What Works Clearinghouse.

Recommendation 2:

To better track the usefulness and costs of the WWC, we recommend that the Secretary of Education direct IES to:

- *Incorporate findings from its cost studies to develop performance measures related to costs, such as identifying a range of acceptable costs per product and using that information to monitor contractor spending.*
- *Develop performance measures related to product usefulness and periodically assess whether WWC products are meeting the needs of target audiences, by gathering information on product usefulness in the proposed survey or through other means.*

Response:

First, as noted in the report, WWC is currently conducting assessments for streamlining procedures and costs at IES' request. The results, due at the end of October 2010, will be incorporated into future WWC work plans and IES's monitoring of contractor performance and costs. IES intends to undertake such assessments on an ongoing basis for continuous improvement.

Second, the WWC will continue to monitor and evaluate consumer use and assessment of WWC products, as well as gather information regarding suggestions for improvements. In addition, the WWC will be included as part of IES' review of its own performance, which will include surveying customers on satisfaction.

In addition, the Clearinghouse already has in place a number of tools for users to provide input, and we will continue to emphasize their availability to the education community. The WWC Help Desk allows users to contact the WWC to send suggestions and ask questions about specific products. Users contact the Help Desk through an 800 number or through the WWC Web site. Since 2007, the WWC has responded to over 2,100 inquiries to the Help Desk.

Users have suggested over 200 interventions for the WWC to review, and have suggested over 30 different topics for practice guides. This information is continuously reviewed by WWC staff and informs priorities. The WWC has used Web-based tools for soliciting specific feedback from users. For example, the WWC has posted potential practice guide topics on a Web-based survey, having users “vote” for their favorite topics. The forthcoming practice guides on Reading Comprehension, Fractions, and Teaching Writing were all identified through this process.

In 2007, 2008, and 2009, the WWC conducted focus groups to solicit feedback from educators on several aspects of its work. These included such topics as the usability of the WWC Web site, which led to improvement to the site functionality, and the format of practice guides, which led to changes in the layout of the guides.

Visits to the WWC Web site have increased substantially over time. Between fiscal years 2008 and 2009, the number of visits rose by 45 percent to 772,000. And, to date in 2010, there have been 618,000 visits to the Web site, an increase of 21 percent relative to the same period in fiscal year 2009. IES will continue to track all of these measures to ensure that we are using solid information on customer use and satisfaction.

Recommendation 3:

To reach more members of the target audience, we recommend the Secretary of Education direct IES to assess and improve its dissemination efforts to promote greater awareness and use of the WWC, for example, by developing a way to inform school districts of new products or encouraging educator professional development programs to focus on research-based practices such as those discussed in practice guides.

Response:

The Department agrees with GAO’s recommendation and is developing further means to assess and improve dissemination efforts. IES’ monitoring of the WWC contract requires implementation of an Annual Communication Plan that specifies how the contractor will conduct outreach, dissemination, and communication activities that include, for example, the WWCFlash, media and trade organization outreach, development of dissemination partnerships with organizations and the education community, WWC sponsored events and forums, and targeted product outreach. IES has made all WWC products available through the Department’s Educational Resources Information Center (ERIC), an online digital library of education research and information, and provides RSS feeds of WWC products to ERIC users. The Department’s National Library of Education makes all WWC products, together with all items indexed in ERIC, available to Google, MSN, and Yahoo search engines for harvesting and, therefore, accessible to Web users worldwide. All WWC products are now available to WorldCat, an international bibliographic database that is used by libraries around the world to identify and locate resources.

IES will continue to develop and implement the Communication Plan vehicle to assess and improve dissemination, as well as fully utilize other Department dissemination resources. One example of a new vehicle that the Clearinghouse has in the works to expand its dissemination partnerships with organizations and the education community is a monthly WWC Newsletter on up-to-date information on recently released Clearinghouse products as well as those in line for release in the month ahead.

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Cornelia M. Ashby, (202) 512-7215, ashbyc@gao.gov

Staff Acknowledgments

In addition to the contact named above, individuals making key contributions to this report include Elizabeth Morrison (Assistant Director), Nagla'a El-Hodiri (analyst-in-charge), James Ashley, Carl Barden, James Bennett, Valerie Caracelli, Laura Henry, Geoffrey King, Jill Lacey, Luann Moy, Robert Owens, Cathy Roark, Stephanie Shipman, Kate Van Gelder, and Craig Winslow.

Related GAO Products

Program Evaluation: A Variety of Rigorous Methods Can Help Identify Effective Interventions. [GAO-10-30](#). Washington, D.C.: November 23, 2009.

Teacher Quality: Sustained Coordination among Key Federal Education Programs Could Enhance State Efforts to Improve Teacher Quality. [GAO-09-593](#). Washington, D.C.: July 6, 2009.

Teacher Preparation: Multiple Federal Education Offices Support Teacher Preparation for Instructing Students with Disabilities and English Language Learners, but Systematic Departmentwide Coordination Could Enhance This Assistance. [GAO-09-573](#). Washington, D.C.: July 20, 2009.

No Child Left Behind Act: Education Actions Could Improve the Targeting of School Improvement Funds to Schools Most in Need of Assistance. [GAO-08-380](#). Washington, D.C.: February 29, 2008.

Program Evaluation: Strategies for Assessing How Information Dissemination Contributes to Agency Goals. [GAO-02-923](#). Washington, D.C.: September 30, 2002.

The Evaluation Synthesis. PEMD-10.1.2. Washington, D.C.: March 1992.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site (www.gao.gov). Each weekday afternoon, GAO posts on its Web site newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to www.gao.gov and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's Web site, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Ralph Dawn, Managing Director, dawnr@gao.gov, (202) 512-4400
U.S. Government Accountability Office, 441 G Street NW, Room 7125
Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

