



## **The What Works Clearinghouse: Helping Educators Find Evidence-Based Research and Interventions**

by  
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A key element of the 2002 No Child Left Behind legislation is “determining what educational programs and practices have been proven effective through rigorous scientific research” (U.S. Department of Education, n.d.). However, it has long been a challenge to identify effective programs and practices. The volume of research has made it difficult to analyze, as has the range of study designs involved. Further, getting understandable and unbiased information on effective interventions to busy educators has been challenging. Despite the wealth of information about educational interventions, educators frequently lack the time and means to evaluate the strength of research evidence and to distinguish scientific from commercial claims (What Works Clearinghouse, n.d.). Educators, policymakers, and the public need a central, independent, and trustworthy source for evidence about which educational programs, practices, and policies improve outcomes for students. To that end, in 2002 the Institute of Education Sciences of the U.S. Department of Education (ED) established the What Works Clearinghouse (WWC) to gather, assess, and disseminate evidence reports on a variety of important education issues.

Administered jointly for ED by the American Institutes for Research and the Campbell Collaboration, the clearinghouse has established scientifically based research as a benchmark for determining the effectiveness of educational interventions. Such research is based on methods that have been proven to determine the degree to which an intervention affects outcomes, so that it can be assumed with some confidence that the intervention has a causal relationship with a beneficial effect. The clearinghouse will provide and promote the use of high-quality information on these causal relationships in order to improve educational decision making. In this evaluation and communication process, the involvement of researchers and practitioners nationwide has been encouraged. This brief describes the key features of the clearinghouse, which is still in the development stage. Discussed are the clearinghouse’s standards for scientific evidence, its evidence reports, and its dissemination efforts.

### **Standards**

The first step in developing WWC was drafting the review standards for scientific evidence that would be used as criteria for assessing the effectiveness of programs. The shaping of the standards was the task of the Technical Advisory Group (TAG), WWC’s core scientific community, which is composed of 14 nationally recognized experts in education research. Standards for studies and interventions were drafted by WWC administrators and the advisory group in the form of a Study Design and Implementation Assessment Device (Study DIAD). This device “assesses the degree to which the design and implementation of individual evaluations permit conclusions about the causal effects of an intervention” (What Works Clearinghouse, 2003, p. 1). The clearinghouse makes it clear that research designs that show causal relationships are by no means the only effective tool for education research. However, because of the mission of the clearinghouse, the central focus of the Study DIAD was on designs such as experiments, quasi-experiments, and correlational studies, which are chiefly meant to show causal relationships (Shadish, Cook, & Campbell, 2002). The WWC administrators and TAG also developed a Cumulative Research Evidence Assessment Device (CREAD) meant to assess the validity of a body of research by analyzing the consistency of findings across studies.

The draft Study DIAD and CREAD were posted on the WWC website in November 2002. Opportunities for public discussion were offered, and the Study DIAD has been revised in response to public input. Revisions have addressed public interest in including studies besides randomized trials and in expanding the scope of features to be analyzed. Revision of CREAD is also continuing. The most recent version of the Study DIAD is being pilot-tested to determine whether the Study DIAD can be reliably used to code studies for WWC evidence reports. At the conclusion of the pilot study, the results will be reviewed by TAG, and further adjustments will be made to facilitate the assessment of studies and interventions for the first series of evidence reports.

## Evidence Reports

Given the requirements of the No Child Left Behind legislation that “educational practice, professional development, technical assistance, and interventions be based in scientifically validated knowledge,” educational leaders are concerned about finding ways to “translate these requirements into reality” (Education Funding Research Council, 2002, p. 11). The evidence on effective programs selected by WWC and translated into summative evidence reports will give educators some of the knowledge they will need to meet the legislative requirements. The preference in the WWC assessment devices for evidence from randomized trials, quasi-experiments, and correlational studies closely matches the rigorous scientific emphasis stressed by the federal law. On the basis of the application of the assessment devices, the evidence reports will describe the effects of specific programs, practices, and policies that are designed to improve student outcomes in selected educational topic areas. For example, a report on interventions for beginning reading could describe the evidence for the effects of a widely used and widely studied program like Reading Recovery.

To identify appropriate topic areas—those with interventions that can be examined for cause–effect relationships—from which to gather information for its initial evidence reports, WWC solicited nominations from a wide array of stakeholders in the education community. Nominated topics with high potential for improving outcomes and with broad applicability were given priority. For its first year, WWC chose seven topic areas for systematic review: beginning reading, K–12 math achievement, dropout prevention, adult literacy, peer-assisted learning, reducing delinquency, and English language acquisition. Subsequently, WWC has been soliciting and searching for relevant studies, including those conducted by program and product developers. Throughout 2003, WWC has collected data on interventions in the topic areas, and the clearinghouse is currently using some of the data to pilot-test its evaluation products and processes. The evidence in each area will be assessed by evidence report teams consisting of a project coordinator, senior content advisor, methodology consultant, and research reviewers. The first wave of reports is expected to be available to the public on the WWC website and through other dissemination strategies early in 2004.

## Dissemination

Because research is most effectively incorporated into educational practice when it “has obvious local utility” and is designed to “fit policymakers’ needs,” disseminating agencies must do more than just report on what works—they must show that what works will work in complex local contexts (Louis & Jones, 2003, p. 23). It will be a key goal of the clearinghouse to help educators use the data from evidence reports in their local contexts by making the data as accessible as possible. Once the initial evidence reports are available, dissemination efforts will center on offering and promoting its findings through several free, searchable, user-friendly databases. The databases will include reviews of potentially replicable interventions that are intended to enhance student outcomes, information about the evaluation studies on which intervention reviews have been based, and a registry of outcome evaluators willing to conduct evaluations of educational interventions. The registry will help schools, districts, and educational program developers select qualified

evaluators to conduct studies on educational outcomes.

Underway or in development are other dissemination efforts that will help educators use the knowledge about effective interventions gathered by the clearinghouse. Presentations on standards and evidence reports have been given at the meetings of many national and local education organizations, including state teacher associations. The clearinghouse has formed a “What Works Network,” an informal communications network of national organizations representing key education constituencies that will provide support for WWC activities and encourage the dissemination and use of WWC products and services. Planned are online and live tutorials to help users learn how to search and interpret the evidence databases, as well as numerous outreach publications that will describe how the findings can be used to improve policy and practice. Also planned are user surveys to help ensure that WWC reviews topics and interventions that are relevant to users’ efforts to raise student achievement.

## Conclusion

In its first year, the What Works Clearinghouse has made significant progress toward establishing a rich source of scientifically based evidence on interventions that work to improve a wide range of student outcomes. It has created, with public collaboration, rigorous evaluation instruments, and it has established processes for using the instruments to identify effective interventions in significant topic areas. The clearinghouse promises to reduce some of the distance between educational research and practice that makes policymakers and practitioners skeptical of research, and it may help direct research efforts toward the most scientifically promising methods, a direction much called for by legislators. Perhaps most important will be its role in calling educators’ attention to programs and products that not only claim to but actually do work.

## References

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