

Responses to comments from the public on *WWC Procedures and Standards Handbook, Version 5.0*

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In August 2022, the What Works Clearinghouse (WWC) released the [WWC Procedures and Standards Handbook, Version 5.0](#). The *Handbook* updated the procedures and standards that define how the WWC identifies evidence of effectiveness on education interventions, assesses its credibility, and characterizes the evidence that meets WWC standards. The Institute of Education Sciences (IES), which oversees the WWC, proposed the updates in consultation with the WWC's Statistical, Technical, and Analysis Team (STAT), which includes external consultants and key staff from WWC contractors, and the WWC's Statistics, Website, and Training (SWAT) staff at the American Institutes for Research®, who led development of the *Handbook*. IES staff from the National Center for Education Evaluation and Regional Assistance (NCEE), the National Center for Special Education Research (NCSE), and the National Center for Education Research (NCER) contributed to the proposed updates.

IES posted a draft of the [WWC Procedures and Standards Handbook, Version 5.0](#), on the WWC website in March 2022, along with an invitation for public comment. This document includes the WWC's responses to the issues raised via public comment, which are grouped by major categories of feedback. An additional resource that addresses changes in the *Handbook* and the WWC's rationale for them is the [Summary of Changes](#) document, which describes all major changes made in version 5.0.

ISSUE 1: THE WWC SHOULD CLARIFY HOW THE STUDY DEFINITION APPLIES TO MULTISITE STUDIES, AND HOW IT PLANS TO EVALUATE AND REPORT FINDINGS FROM MULTISITE STUDIES.

The final version of the *Handbook* clarifies how the WWC will define a study and evaluate findings, including findings from blocked or multisite studies. The updated text explains that the WWC will consider block- or site-specific effects reported in separate manuscripts for different studies. If block- or site-specific effects are reported in one manuscript, then the WWC will consider it a single study. How the WWC will evaluate and aggregate findings from such studies is consistent with the procedure outlined in appendix F of the *Handbook*.

ISSUE 2: THE WWC SHOULD PROVIDE ADDITIONAL GUIDANCE ON BASELINE EQUIVALENCE AND BASELINE ADJUSTMENT UNDER VERSION 5.0.

The final version of the *Handbook* clarifies when the WWC requires evidence of baseline equivalence and adjustments for baseline differences. The *Handbook* clarifies that baseline differences less than or equal to 0.05 standard deviation automatically satisfy the baseline equivalence standard and do not require additional adjustment. Updates to Figures 5 and 7, which depict pathways to satisfying WWC standards, show that adjustments for baseline differences may be required in some but not all instances. The *Handbook* clarifies that cluster randomized controlled trials must demonstrate baseline equivalence if the analytic sample includes high-risk joiners or if attrition was high for any type of attrition assessed using the cautious boundary.

ISSUE 3: THE WWC SHOULD CLARIFY THE PROCESS FOR AUTHOR QUERIES (AQs), SUCH AS WHEN TO QUERY FOR SAMPLE INDEPENDENCE OR WHETHER AQs SHOULD BE SENT BEFORE OR AFTER A SECOND REVIEWER IS ASSIGNED.

Review team leadership has the discretion of adapting the AQ process as needed, including the timing of AQs and information requested in AQs. Appendix B of the *Handbook* has been edited to indicate this flexibility.

ISSUE 4: THE WWC SHOULD CONSIDER REVISIONS TO STANDARDS FOR SINGLE-CASE DESIGN (SCD) STUDIES FOR CLARITY AND BETTER ALIGNMENT WITH PROCEDURES USED BY SCD RESEARCHERS.

The final version of the *Handbook* includes several clarifications in response to public comments related to the WWC's procedures and standards for reviewing SCDs. For example, the *Handbook* clarifies research design requirements for multiple baseline/multiple probe designs (that is, concurrence requirements to allow for vertical comparison) and alternating treatment design (that is, options for the three demonstrations). The *Handbook* further clarifies the design-comparable effect size for SCDs. It also explains the reasoning for including a nonoverlap of all pairs of .85 or smaller as evidence of minimal therapeutic baseline trend, which is a result of the WWC's consultation with applied and methodological SCD experts and which the WWC will monitor and potentially revise in the future.

Finally, the WWC recognizes that visual analysis plays a central role in SCD studies. The goal of many updates to the SCD standards in version 5.0 is to better align the standards with visual analysis practices intended to protect the internal validity of SCD studies. The process of visual analysis is one of simultaneous design assessment and analysis, in which design assessment is strongly linked to the

analysis of the observed pattern of the data. The WWC instead reviews designs separately from analysis and only potentially estimates effects after assessing study quality. While this underscores an important distinction in the objectives of the WWC and the application of visual analysis in primary research, IES is committed to further improving the SCD standards in future updates and identifying opportunities for visual analysis to inform the review process.

ISSUE 5: THE WWC SHOULD HELP THE PUBLIC IDENTIFY INTERVENTIONS THAT USED OPEN SCIENCE PRACTICES.

IES is committed to open science and agrees that open science principles and practices are important when considering the quality of research evidence. IES's commitment is articulated in [Standard for Excellence in Education Research](#) principles, which is the primary mechanism through which IES is highlighting modern methodological issues and advancing innovations in applied education research to address them.