

Strengthening Institutions Program

Webinar on

Competitive Priority on Evidence

April 11, 2012

Note: These slides are intended as guidance only. Please refer to the official documents published in the *Federal Register*.

Agenda

- Overview of the Competitive Priority
- Defining Evidence: “Strong” vs. “Moderate”
 - What is Evidence of Effectiveness?
 - Criteria for Strong Evidence
 - Criteria for Moderate Evidence
- Process for Reviewing Evidence
- Questions & answers
 - Live—submission via the webinar chat function
 - Post-webinar: E-mail to OPE.SIPCompetitivePreferencePriority@ed.gov

Overview of Competitive Priority

- Support programs, practices, and strategies for which there is strong or moderate evidence of effectiveness, awarding up to 5 additional points (p. 13)
- Applicants addressing the priority may include up to 5 additional pages in their application narrative, under a separate heading. (p. 27)
- Demonstration of supporting evidence for proposed activities should go in Appendix D (pp. 27-28): all study “citations,” Web links, copies. **MUST BE PUBLICLY**

Defining Evidence of Effectiveness: Strong and Moderate

Evidence of Effectiveness: What is it? (1)

- Previous studies that isolate the “impact” of the program, practice, strategy; i.e., has to demonstrate that the program *caused* the improvement (“internal validity”)
 - Not all studies address effects (e.g., use of data to identify a problem, case studies on how to implement a strategy)
 - Studies vary in how rigorously they address internal validity, see definitions section of notice for: (a) different study designs; and (b) “well implemented”
 - At minimum, studies of effectiveness need a well-defined outcome measure and both a treatment (participant) and control/comparison (non-participant) groups

Study Designs Ordered by Internal Validity

- ❑ Experimental/randomized controlled trials (RCTs)
- ❑ Quasi-experimental studies
 - Matched comparison group
 - Regression discontinuity design
- ❑ Interrupted time series
- ❑ Correlational analysis

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- ❑ Descriptive
 - ❑ Case Studies
 - ❑ Anecdotes and testimonials

Caution: Not All Associations Support Causal Inferences

The Data: Dropouts by Class Size for Developmental Ed Courses



(Mis-) Interpretive Statement:

Evidence supports proposed grant activity to reduce developmental education class sizes in order to lower the dropout rate.

Problem: There are competing explanations for why dropout increases with increases in class size

Evidence of Effectiveness: What is it? (2)

- Previous studies that pertain to the kinds of participants and settings that are the focus of your grant application (“external validity” or generalizability)
 - Studies will vary in how closely related they are to your population
 - Number of studies of a program or strategy matter: the more “replications” the more confident we can be in study results
 - Size of each study sample matters: more confidence in studies with a large number of participants than in studies with a small number

Evidence of Effectiveness: Summary of Key Criteria

- “Rigor” of study design
- Implementation of study design/extent of “flaws”
- Number of studies related to your proposed program, practice, strategy
- Number of students/institutions involved in studies

“Strong Evidence” of Effectiveness

- High internal validity of the evidence
 - Studies designed/implemented in ways that support conclusions that program “caused” a change/difference in outcomes
 - High external validity of the evidence
 - Studies based on a sufficient representation of participants and settings that the findings support
 - Minimum size of evidence base
 - More than one well-designed and well-implemented experimental/RCT or quasi-experimental study
- OR
- One large, well-designed and well-implemented multi-site experimental/RCT

“Moderate Evidence” of Effectiveness

- Internal/external validity of the evidence
 - High internal validity and moderate external validity
OR
 - High external validity and moderate internal validity
- Minimum size of evidence base
 - At least one well-designed experimental/RCT or quasi-experimental study
 - May have small sample sizes or other conditions that limit generalizability, or may fail to demonstrate equivalence between the intervention and comparison groups, but has no other major flaws
 - OR
 - A correlational study with strong statistical controls for selection bias and for discerning the influence of other potential confounds

Evidence Review Process

Responsibility for the Evidence Reviews

- Institute of Education Sciences (IES) conducts reviews, reports findings to Office of Postsecondary Education
- Reviews limited to evidence in Appendix D that are relevant to proposed activities, as outlined in the proposal abstract
- IES uses What Works Clearinghouse (WWC) evidence standards and certified WWC reviewers to judge the causal (internal) validity of the evidence
 - Reviewers have doctorates and are tested by WWC
 - Most are faculty but some are IES evaluation contractors

WWC Standards: What do Reviewers Look For?

- Type of design: does the study design allow us to draw causal conclusions?
- Strength of data: does the study focus on relevant outcomes and measure them appropriately?
- Adequacy of statistical procedures: are the data analyzed properly?

<http://ies.ed.gov/ncee/wwc/references/idocviewer/doc.asp?docid=19&tocid=1>

Evidence Reviews: Strong Evidence

1. Does the evidence include a sufficient number and quality (rigor/implementation) of studies?
 - (1) More than one well-designed and well-implemented experimental/RCT study or well-designed and well-implemented quasi-experimental study?
or
 - (2) One large, well-designed and well-implemented multi-site experimental study/RCT?

2. Does the evidence include a reasonable representation of the kinds of participants and settings proposed for SIP grant activities?

Evidence Reviews: Moderate Evidence

1. Does the evidence include a sufficient number and quality (rigor/implementation) of studies?
 - (1) At least one well-designed experimental/RCT or quasi-experimental study, with either (a) small sample size; (b) conditions of implementation/analysis that limit generalizability; or (c) failure to demonstrate equivalence between the participant and comparison groups
 - or
 - (2) At least one correlational study with strong statistical controls for possible selection bias

2. Is the evidence based on participants and settings that at least overlap with those proposed for SIP grant activities?

Questions & Answers

Please submit your questions on evidence eligibility requirements via the Webinar chat function now.

Other Important Resources

SIP Fund Web site:

(<http://www2.ed.gov/programs/iduestitle3a/index.html>)

- Notices of Final Revisions to Priorities, Requirements, and Selection Criteria
- Application Packages for each competition (includes the respective Notice Inviting Applications)
- Frequently Asked Questions

What Works Clearinghouse Web site:

(<http://ies.ed.gov/ncee/wwc>)

- Reference Resources, Procedures and Standards Handbook
- Quick Review Protocol

All questions about the SIP CPP may be sent to:

OPE.SIPCompetitivePreferencePriority@ed.gov