

McCallum, Diana

From: McCallum, Diana
Sent: 9 Sep 2013 10:39:52 -0500
To: Cheryl Behany; Scott Cody; Neild, Ruth; Jill Constantine
Subject: FW: draft email to WWC
Follow-up on Fractions

From: McCallum, Diana
Sent: Thursday, September 05, 2013 2:15 PM
To: McLaughlin, Joan
Cc: Neild, Ruth; Lesnick, Joy; Ochsendorf, Robert
Subject: FW: draft email to WWC

Hi Joan,

We wanted to follow-up on the email you send regarding the Fractions study that was recently reviewed in a single study review (Lyn Fuchs & colleagues). We've asked Mathematica to respond and they've developed a suggestion for revising the SSR below. Their suggestion is to indicate specifically that the portion of the study that analyzes the impact of Fraction Challenge on at-risk student was supported by a well-implemented RCT.

The reason that the baseline differences between at-risk and low-risk students are raised a caution within the study because the authors present this difference along with the other main effects that are listed for the study. The WWC is simply saying that the difference between those groups could be due to some bias that already existed (which makes perfect sense). Raising this as a caution is not intended to indicate that there is a design flaw in the study, it's simply provided to indicate that that particular comparison doesn't meet standards. The WWC is not discouraging authors from comparing at-risk to low-risk students, or from presenting information that's helpful for the overall study. We've found that this is often a difficult message to convey to the field: that the WWC is not indicating what makes for an interesting study that's relevant to the key questions in a particular field.

Internally, we discussed this issue and potential approaches. One thought is that NCSER can provide some context and explanation to the authors about the meaning of the WWC's rating. It seems that NCSER can explain that benchmarking at-risk students relative to low-risk student is still critical information to include in a study. Does that make sense?

If it's more helpful to chat about this, just let us know!

Diana

From: Scott Cody [mailto:SCody@Mathematica-Mpr.com]
Sent: Wednesday, September 04, 2013 8:10 AM
To: McCallum, Diana
Cc: Russell Cole; Neil Seftor; Jill Constantine; Neild, Ruth; Cheryl Behany
Subject: RE: draft email to WWC

Hi Diana,

We have looked into Dr. McLaughlin's concern that the WWC identified a caution in the Fuchs et al. study even though the study met standards without reservations. It is important to note that the WWC does not apply a single rating to each manuscript; rather, different analyses within a study can receive different ratings. In this study, the experimental analysis of at-risk youth assigned to *Fraction Challenge* did, indeed, meet WWC standards without reservations. However, the comparison of at-risk vs. low-risk students does not meet WWC standards. For quasi-experimental comparisons, the WWC requires comparison groups to be equivalent at baseline. By virtue of the comparison of at-risk vs. low-risk students, these groups are not equivalent. As a result, we determined that this contrast does not meet WWC standards.

We understand that the intent of the analysis of low-risk students was to present the study findings relative to a benchmark. However, we still believe it is important to present this caution. The study's main findings table (Table 2) presents effect sizes for the at-risk vs. low-risk comparison alongside findings for the at-risk intervention and control groups. We believe this caution is necessary to help readers interpret which contrasts in that table (and elsewhere in the study) support causal inferences.

We recognize that the WWC rating in the single study review does not explicitly state that multiple ratings were applied. We will revise this text in the SSR to clarify that the caution does not apply to the analysis of at-risk students. Specifically, we will make the following change:

Current Text

The research described in this report meets WWC evidence standards without reservations

Strengths: The study is a well-implemented randomized controlled trial with low attrition.

Cautions: The author's comparison of the performance of at-risk students receiving Fraction Challenge to the performance of low-risk students did not meet WWC evidence standards, because the groups were not equivalent at baseline.

Revised Text

The research described in this report meets WWC evidence standards without reservations

Strengths: The **analysis of the impact of Fraction Challenge on the achievement of at-risk students** reflects a well-implemented randomized controlled trial with low attrition.

Cautions: The author's comparison of the performance of at-risk students receiving Fraction Challenge to the performance of low-risk students did not meet WWC evidence standards, because the groups were not equivalent at baseline.

Please let us know if you have additional questions.

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From: McCallum, Diana [mailto:Diana.McCallum@ed.gov]
Sent: Wednesday, August 28, 2013 2:40 PM
To: Jill Constantine; Neild, Ruth; Scott Cody; Cheryl Behany
Subject: FW: draft email to WWC

Hi There,

I wanted to pass this on to you for your thoughts on Joan's comments.

Diana

From: McLaughlin, Joan
Sent: Wednesday, August 28, 2013 2:09 PM
To: McCallum, Diana
Cc: Neild, Ruth; Ochsendorf, Robert
Subject: FW: draft email to WWC

Hi Diana,

Could you please look into an issue on one of the single study reviews (by Lynn Fuchs and colleagues) that was released on Tuesday

http://ies.ed.gov/ncee/wwc/pdf/single_study_reviews/wwc_fractions_082713.pdf?

While the study was rated as meeting evidence standards without reservations, the review raised as a caution the lack of baseline equivalence between the students with disabilities and their low-risk peers. We would like to point out that in this particular study, low-risk classmates were included only to index differences among the 3 groups with respect to an important benchmark: achievement gaps relative to low-risk students (who, by definition, began the study with higher performance). This is a desired benchmark for researchers to use. Identifying this as a "caution," implies a design flaw, would seem to discourage program developers from considering and reporting this important benchmark.

Thanks for following up.

Joan